DOCUMENT RESUME

ED 026 301 24 SP 002 147

By-Benjamin, William; And Others

Specifications for a Comprehensive Undergraduate and Inservice Teacher Education Program for Elementary Teachers. Final Report. Volume I.

Syracuse Univ., N.Y.

Spons Agency-Office of Education (DHEW), Washington, D.C. Bureau of Research.
Bureau No-BR-8-9018
Pub Date 31 Oct 68
Contract-OEC-0-8-0918-3313(010)
Note-295p.
EDRS Price MF-$1.25 HC-$14.85
Descriptors-Behavioral Objectives, Child Development, Cooperative Programs, *Educational Specifications, Elementary School Curriculum, *Elementary School Teachers, Feedback, Humanities, *Inservice Teacher Education, Instructional Design, Instructional Innovation, Interinstitutional Cooperation, Models, Natural Sciences, *Preservice Education, Problem Solving, Schedule Modules, Social Sciences, Teacher Behavior, *Teacher Education, Teacher Education Curriculum
Identifiers-Syracuse University

This first volume contains the rationale and overview, program organizational structure, and most of the program elements for a model intended to be adaptable by a variety of teacher training institutions for the development and implementation of such a program. (volume 2, SP 002 148, contains the remainder of the program components and models for the three support systems.) The section on rationale emphasizes the self-renewing aspect of the model, based on an intent-action-feedback process. The section on organization outlines a 5-year program structured around a series of seven program components which are process-oriented first and content-oriented second. The remaining sections present four of the seven "program components," (unified sets of curricular-instructional experiences each comprised of several "instructional modules," planned instructional episodes from several hours to several months in length). The Liberal Education Component is presented with rationale, organization, and descriptions of three 6-semester-hour courses in the humanities, social sciences, and natural sciences. The sections on the Methods and Curriculum Component, which emphasizes a problem-resolution approach, and on the Child Development and Teaching Theory and Practice Components contain outlines of the instructional modules, each including prerequisites, estimated time, operational objectives, and description of instructional activities with flow chart. (ED 018 677 is a related document.) (JS)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

PA 24
BR-OE
BR8-9018

FINAL REPORT
Project No. 8-9018
Contract No. OEC-0-8-0918-3313 (010)

ED026301

SPECIFICATIONS FOR A COMPREHENSIVE UNDERGRADUATE AND INSERVICE TEACHER EDUCATION PROGRAM FOR ELEMENTARY TEACHERS

Volume I

William Benjamin
Arthur Blumberg
Berj Harootunian
John Hough
Delayne Hudspeth
Margaret Lay
Ernest Lohman
Laurence Martel
Robert Newman
Charles Rathbone
Gerald Reagan
Augustin Root
Albert Stahl
Wilford Weber

Syracuse University
Syracuse, New York

October 31, 1968

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

SP002147

TABLE OF CONTENTS

Page

LIST OF FIGURES v

PREFACE x

SUMMARY 1

Chapter

I. RATIONALE AND OVERVIEW FOR THE MODEL 9

Introduction 9
The Program 12
The Dynamics of the Model 12
Program Design 17
Components of the Model Program 19
Support Systems 26
Summary 28

II. THE PROGRAM ORGANIZATIONAL STRUCTURE OF THE MODEL 30

Overview of the Organization of the Program 35
The Junior Pre-Professional Year 35
The Senior Professional Year 49
The Resident Year 63
Summary 67

III. LIBERAL EDUCATION COMPONENT 72

Rationale 72
Organization 75
The Humanities 78
The Social Sciences 80
The Natural Sciences 82
The Liberal Education Component in Operation 84
The Liberal Education Component and the Future of the Individual Elementary School Teacher 88

IV. METHODS AND CURRICULUM COMPONENT 89

Rationale 89
Phases of the Problem Resolution Model 95
Curriculum Areas to be Covered 99
Organization of Component 102
Modular Outlines 104

V. CHILD DEVELOPMENT COMPONENT 175

Rationale 175
Organization of the Component 178
Rationale for Placement and Sequence of the Modules 179
Modular Outlines 182

VI. TEACHING THEORY AND PRACTICE COMPONENT 219

Rationale 219
The Teaching Theory and Practice Component Organization 222
Modular Outlines 226

VII. PROFESSIONAL SENSITIVITY TRAINING COMPONENT 283

Rationale 283
Organization of Component 284
Modular Outlines 286

VIII. SOCIAL-CULTURAL FOUNDATIONS COMPONENT 314

Rationale 314
Organization of Component 319
Modular Outlines 329

IX. THE SELF-DIRECTED COMPONENT 410

Rationale 410
Primary Objectives of the Self-Directed Component 411
Justification of the Self-Directed Component in an Elementary Teacher Preparation Program 413
An Operational Description of the Self-Directed Component 416
Basic Units and Personnel of the Self-Directed Component 421

X. SCENARIO 440

XI. RATIONALE FOR SUPPORT SYSTEM 461

XII. THE PROGRAM SUPPORT SYSTEM 465

Rationale 465
Stages of Program Development 467
Elements of Program Development.......... 469
Implementation Steps 470
Operation 471
Spaces and Facilities 475
Protocooperation and the Program Support System 476
Summary of Program Support System 477

XIII. INFORMATION AND EVALUATION SUPPORT SYSTEM 478

Instruction Management 478
The Necessity for Evaluation 479
Measurement and Evaluation 480
A Model for Evaluation 482
The Monitoring Model 485
Evaluation Strategies 486
Dissemination 493

XIV. THE ORGANIZATIONAL SUPPORT SYSTEM 494

Role Function for the Organizational Support System 497
The Maintenance Sub-Structure 500
The Adaptive Sub-Structure 503

APPENDIX A 509

APPENDIX B .... (Project Staff and Consultants).............. 531

BIBLIOGRAPHY 539

LIST OF FIGURES

Figure #	Title	Page
1.1	Model of a Life-giving System	14
1.2	Overview of the Five Years of the Model Program	20
2.1	The Concept of Protocooperation	33
2.2	Modular Flow Chart for the Junior Year Program	38
2.3	Modular Flow Chart for the Methods and Curriculum Component Junior Year	39
2.4	Modular Flow Chart for the Child Development Component Junior Year	40
2.5	Modular Flow Chart for the Teaching Theory and Practice Component Junior Year	41
2.6	Modular Flow Chart for the Professional Sensitivity Training Component Junior Year	42
2.7	Modular Flow Chart for the Social and Cultural Foundations Component Junior Year	43
2.8	Flow Chart for Self-Directed Component Junior Year..................................	44
2.9	Organization of the Personnel of a Typical Tutorial and Micro-teaching Center	47
2.10	Organization of the Personnel of a Typical Teaching Center	51
2.11	Planning, Teaching, Feedback, Evaluation Cycle..............................	53
2.12	Modular Flow Chart for the Senior Year Program..................................	55
2.13	Modular Flow Chart for the Methods and Curriculum Component Senior Year................	56
2.14	Modular Flow Chart for the Child Development Component Senior Year.....................	57

2.15 Modular Flow Chart for the Teaching Theory and Practice Component Senior Year.............. 58

2.16 Modular Flow Chart for the Professional Sensitivity Training Component Senior Year...... 59

2.17 Modular Flow Chart for the Social and Cultural Foundations Component Senior Year.. 60

2.18 Flow Chart for the Self-Directed Component Senior Year................................. 61

2.19 Organization of the Personnel of a Typical Resident Center School.......................... 66

2.20 The Year of Residence Teaching and Study and Summer Specialization....................... 68

2.21 Modular Flow Chart for the Social and Cultural Foundations Component Resident Year.. 69

3.1 Organization of the Liberal Education Component....................................... 86

4.1 A Problem Resolution Model...................... 93

4.2 Modular Flow Chart CM-1.1...................... 112

4.3 Modular Flow Chart CM-2........................ 115

4.4 Modular Flow Chart CM-3........................ 118

4.5 Modular Flow Chart CM-4........................ 121

4.6 Modular Flow Chart CM-5........................ 124

4.7 Modular Flow Chart CM-6........................ 127

4.8 Modular Flow Chart CM-7........................ 131

4.9 Modular Flow Chart CM-8........................ 134

4.10 Modular Flow Chart CM-9........................ 137

4.11 Modular Flow Chart CM-10....................... 140

4.12 Modular Flow Chart CM-11....................... 144

4.13 Modular Flow Chart CM-12........................ 147

4.14 Modular Flow Chart CM-13........................ 150

4.15 Modular Flow Chart CM-14........................ 153

4.16 Modular Flow Chart CM-15........................ 156

4.17 Modular Flow Chart CM-16........................ 157

4.18 Modular Flow Chart CM-17........................ 162

4.19 Modular Flow Chart CM-18........................ 165

4.20 Modular Flow Chart CM-19........................ 168

4.21 Modular Flow Chart CM-20........................ 171

4.22 Modular Flow Chart CM-21........................ 174

5.1 Modular Flow Chart CD-1......................... 184

5.2 Modular Flow Chart CD-2......................... 187

5.3 Modular Flow Chart CD-3......................... 190

5.4 Modular Flow Chart CD-4, CD-5, CD-6............. 194

5.5 Modular Flow Chart CD-7......................... 197

5.6 Modular Flow Chart CD-8......................... 200

5.7 Modular Flow Chart CD-9......................... 204

5.8 Modular Flow Chart CD-10........................ 208

5.9 Modular Flow Chart CD-11........................ 212

5.10 Modular Flow Chart CD-12........................ 215

5.11 Modular Flow Chart CD-13........................ 218

6.1 The Use of Intentions, Perceptions, Concepts, Principles, and Values in Decision-making................................ 223

6.2 Modular Flow Chart TTP-1........................ 228

6.3 Modular Flow Chart TTP-2........................ 231

6.4 Modular Flow Chart TTP-3........................ 234

6.5 Modular Flow Chart TTP-4........................ 238

6.6 Modular Flow Chart TTP-5........................ 241

6.7 Modular Flow Chart TTP-6........................ 244

6.8 Modular Flow Chart TTP-7........................ 248

6.9 Modular Flow Chart TTP-8........................ 252

6.10 Modular Flow Chart TTP-9........................ 255

6.11 Modular Flow Chart TTP-10....................... 258

6.12 Modular Flow Chart TTP-11....................... 262

6.13 Modular Flow Chart TTP-12....................... 266

6.14 Modular Flow Chart TTP-13....................... 270

6.15 Modular Flow Chart TTP-14....................... 274

6.16 Modular Flow Chart TTP-15....................... 278

6.17 Modular Flow Chart TTP-16....................... 282

7.1 Modular Flow Chart PST-1........................ 288

7.2 Modular Flow Chart PST-2........................ 293

7.3 Modular Flow Chart PST-3........................ 297

7.4 Modular Flow Chart PST-4........................ 301

7.5 Modular Flow Chart PST-5........................ 305

7.6 Modular Flow Chart PST-6........................ 308

7.7 Modular Flow Chart PST-7........................ 313

8.1 Modular Flow Chart SCF-1........................ 332

8.2 Modular Flow Chart SCF-2........................ 336

8.3 Modular Flow Chart SCF-3........................ 341

8.4 Modular Flow Chart SCF-4........................ 345

8.5 Modular Flow Chart SCF-5........................ 349

8.6 Modular Flow Chart SCF-6........................ 354

8.7 Modular Flow Chart SCF-7........................ 360

8.8 Modular Flow Chart SCF-8........................ 363

8.9 Modular Flow Chart SCF-9........................ 368

8.10 Modular Flow Chart SCF-10........................ 372

8.11 Modular Flow Chart SCF-11........................ 375

8.12 Modular Flow Chart SCF-12........................ 379

8.13 Modular Flow Chart SCF-13........................ 383

8.14 Modular Flow Chart SCF-14........................ 386

8.15 Modular Flow Chart SCF-15........................ 389

8.16 Modular Flow Chart SCF-16........................ 393

8.17 Modular Flow Chart SCF-17........................ 397

8.18 Modular Flow Chart SCF-18........................ 400

8.19 Modular Flow Chart SCF-19........................ 403

8.20 Modular Flow Chart SCF-20........................ 406

8.21 Modular Flow Chart SCF-21........................ 408

12.1 Stages in the Development of Instructional Modules........................... 468

12.2 Steps Leading to the Design of a Module... 472

12.3 Steps Leading to the Development of a Tested Module.................................. 473

12.4 Monitoring, Evaluation, and Re-design System for a Tested Module...................... 474

13.1 Feedback Control Loop: Evaluation Support System................................. 484

13.2 A Model for Monitoring Student Progress......... 487

13.3 Summary of Presage, Process, Products Evaluation Strategies........................... 492

PREFACE

This report contains a model of a preservice and inservice teacher education program for elementary school teachers. It is one of nine commissioned by the United States Office of Education for the purpose of generating new ideas about the education of elementary school teachers. This preface is written primarily for potential adopters of one or a combination of the nine prototypes developed over the last nine months. In a very real sense, however, this preface is written for teacher educators whether or not they engage in the second phase of the project that will lead to Federal support for the development and implementation of a new and innovative teacher education program in their institution. For those who read this document as potential adopters of one of the nine models, they will face a decision far more difficult than Stephen Crane's Wayfarer or Robert Frost's Traveler in "The Road Not Taken". The persons depicted in the poems by Stephen Crane and Robert Frost were faced with but two decisions. The decision-making process that a potential adopter of this or the other eight models is faced with involves a far more complex decision-making process. Engage for a moment in the luxury of dichotomous decision-making:

The Wayfarer

The wayfarer,
Perceiving the pathway to truth,
Was struck with astonishment.
It was thickly grown with weeds.
"Ha," he said,
"I see that none has passed here
In a long time."
Later he saw that each weed
Was a singular knife.
"Well," he mumbled at last,
"Doubtless there are other roads."*

The Road Not Taken

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;

---

* From The Collected Poems of Stephen Crane, by Stephen Crane. Copyright 1930 by Alfred A. Knopf, Inc. Reprinted courtesy of the publisher.

Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,

And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I--
I took the one less traveled by,
And that has made all the difference.*

The ironic pessimism of the Wayfarer of Stephen Crane and the romantic and sentimental leisurely moment of the Traveler of Robert Frost are not polarizations of the options which potential adopters of these nine model projects can afford to entertain. New visions of teacher education and new visions of the role of the teacher will not be facilitated by either pessimism or romanticism. Deep inside many of us is the gnawing realization of the reality of our own obsolescence as expressed in the poem, "September, 1966", by Robert Huff:

September, 1966

A passing heron, barely visible,
Shies at the central heating plant's smoke stack.
Postmarked the 7th from two graduates,
The pilot and the seminarian
Defector who eloped to practice law,
Both letters lying open on the desk.

"My sweaty cheeks," Dave sprawls, "biting the seat,
I rise in half-light, jumpy, letting go
That red-hot payload. Somehow these V-Cong
Are catching on to almost everything."

---

* From Complete Poems of Robert Frost. Copyright 1916, by Holt, Rinehart, and Winston, Inc. Copyright 1944, by Robert Frost. Reprinted by permission of Holt, Rinehart, and Winston, Inc.

Gerard's pinched hand: "Last week, you see, my wife-
Forgive this news--last week she hanged herself."

And fogging in this week September's back.
My students, always quick to find me out,
Cannot forgive bad news. I am old hat.

I lock the door, pretend the window's black,
Feel round the bottom drawer and reach my flask....
Perhaps that cloudy heron was a stork,
A nuisance around any chimney top.
All old birds ought to be against the law.*

And yet, we "old birds" who have lived our lives in dedication to the education of teachers, many of whom have considered us "old hat", may find sustenance in old birds refeathered as they try their wings in adopting and implementing one of these nine experimental model programs. As we look at the world of teacher education today, one wonders if we really have a choice. The poem, "An Elementary School Classroom in a Slum" written by Stephen Spender long before ghetto schools became popular in the vocabulary of teacher educators could have been written today:

An Elementary School Classroom in a Slum

Far far from gusty waves, these children's faces.
Like rootless weeds the torn hair round their paleness.
The tall girl with her weighed-down head. The paper-
seeming boy with rat's eyes. The stunted unlucky heir
Of twisted bones, reciting a father's gnarled disease,
His lesson from his desk. At back of the dim class,
One unnoted, sweet and young: his eyes live in a dream
Of squirrels' game, in tree room, other than this.

On sour cream walls, donations, Shakespeare's head
Cloudless at dawn, civilized dome riding all cities.
Belled, flowery, Tyrolese valley. Open-handed map
Awarding the world its world. And yet, for these
Children, these windows, not this world, are world,
Where all their future's painted with a fog.
A narrow street sealed in with a lead sky,
Far, far from rivers, capes, and stars of words.

---

* Copyright, 1968, Saturday Review, Inc. Reprinted by permission of Saturday Review, ~~Inc. and Robert~~ Huff.

Surely Shakespeare is wicked, the map a bad example
With ships and sun and love tempting them to steal--
For lives that slyly turn in their cramped holes
From fog to endless night? On their slag heap, these children
Wear skins peeped through by bones and spectacles of steel
With mended glass, like bottle bits on stones.
All of their time and space and foggy slum
So blot their maps with slums as big as doom.

Unless, governor, teacher, inspector, visitor,
This map becomes their window and these windows
That open on their lives like crouching tombs
Break. O break open, till they break the town
And show the children to the fields and all their world
Azure on their sands, to let their tongues
Run naked into books, the books, the white and green leaves open
The history theirs whose language is the sun.*

The plight of these children is not only the plight of the child in the classroom in a slum. It is the plight of many children in elementary schools in the suburban and rural areas of the United States. The models that you will read will propose ways of educating teachers to help children "to see the fields, and all their world." The model program presented in the remainder of this report is particularly dedicated to that task. It proposes a teacher education program that is designed not only to help beginning teachers themselves see new fields and new worlds, and to adapt to the changing ecology of those fields and the changing sociology of that world, but to be a partner in that change. It is hoped that the wayfarer who reads this report as well as the other eight will be struck with whatever truth exists in this report and will be realistically aware that the pathway to "truth" is "thickly grown with weeds." It is hoped that he will not tarry too long in the romantic wood far from the elementary school classroom described by Stephen Spender; it is hoped that if he mumbles "doubtless there are other roads" that these nine models will have pointed the direction for those other ways. How long can future teachers forgive the bad news that in many ways, we are "old hat"? How long can we forget, "the history theirs whose language is the sun."

---

* "An Elementary School Classroom in a Slum" Copyright 1942 by Stephen Spender. Reprinted from SELECTED POEMS, by Stephen Spender, by permission of Random House, Inc.

SUMMARY

This summary is intended to provide a cognitive distillation of the essential assumptions, program elements, supporting structures, and organizational considerations that constitute this Model Program. The reader of the description of this model as well as the other eight models that have been developed, is in fact faced with the highly complex task of assimilating, integrating, and deciding which model or combination of models are most compatible with his institution. Upon reading this summary, the potential adopter should be able to make a tentative decision regarding whether or not this model or some adaptation of it is compatible with the philosophy and structure of his institution. If it is, then the reader will wish to pursue the entire report with the idea that this model may serve as the basis for the elementary teacher education program in his institution. If the model does not seem to be compatible with the philosophy and structure of the reader's institution, he may wish to put off further serious reading of this report until a more leisurely time.

Scope of the Model Program

The Model Program described in this report is a generalized model that is intended to provide a blueprint for the development and implementation of an elementary teacher education program for the generalized elementary school teacher. That is to say, the model is not a blueprint for the preparation of teachers for "educationally disadvantaged" children, "empathically barren" suburban children, "culturally isolated" rural children, pre-school, primary, or intermediate grade children. It is a model designed to be adaptable for the preparation of teachers for some or all of the children described above. The model is also intended to be flexible enough to be adaptable to the unique focus of the reader's institution and the community of children he feels most committed to serve, and most competent to prepare teachers to work with. The model is designed to be adoptable by a variety of teacher training institutions.

Assumptions Underlying the Structure of the Model

The model is based on six principal assumptions:

1. At this state in the development of teacher education there are many diverse views regarding what form a teacher education program should take. There is little empirical evidence to support any of these views. Rather than take one of these points of view, (a course of action that could provide the opportunity for an intensive test of its validity), the project staff has intentionally embraced many diverse views. This has not been done with the intention of developing an eclectic model, but rather has been done with the deliberate intention of creating an atmosphere of open dialogue in which hypotheses generated from many views can be tested. Throughout

the description of the model the term *pluralism* is used. When it is used, it refers to the recognition of the existence of different views about the essential characteristics of an ideal teacher education program. It further recognizes that these different points of view exist together in this model for the expressed purpose of creating dialogue and generating and testing hypotheses about what constitutes appropriate teacher education experiences for students with different presage characteristics. *We assume that no one point of view regarding teacher education has been demonstrated to be most effective. We, therefore, assume that from a pluralistic open dialogue involving students, teachers, and researchers, that hypotheses can be generated and tested that may tighten the circle around those ideas, activities, artifacts, and people that would constitute a more ideal teacher education program than many of us currently work with.*

2. Closely related to the first assumption is an assumption drawn from the realization that we live in a world where basic institutions (including their value structures) are changing at an exponential rate. Even if we could presume to know what would constitute the ideal teacher education program for elementary school teachers today, we could not presume that such a program would be anything more than an anachronism ten years from now. Nor could we presume that the teachers educated in that program would be not equally anachronistic. This Model Program, therefore, has been designed to educate teachers who can successfully function in the elementary school as it currently exists, who can adapt to change, and who can themselves help guide the direction of that change. Such teachers are referred to throughout this report as self-directed and self-renewing teachers. *We assume, therefore, an uncertain future in which there will be children to educate. We further assume that since we do not know what form that future world, its societies, and institutions will take, or how the children of such a society should be educated, that teachers educated today must be educated to be continually self-renewing as they adapt to and play a major role in shaping the changes that seem certain in the future world of education.*

3. This leads to the third assumption regarding the necessity for a Model Program that is an open system, a program which will nurture a pluralistic and changing teacher education program in the near and somewhat distant future. For an educational system to change appropriately in response to changes in the world in which it "lives", such a system must be an open system. Dialogue and research serve only at best to raise questions about and point the direction to appropriate change. Testing hypotheses at best generates data to

serve as necessary but never sufficient evidence to support or refute the validity of instructional processes. When open dialogue leads to hypotheses, when hypotheses give direction to research that yields tentative data, when people act on such data, and when the effect of their actions are studied, this is an *intent-action-feedback* process. When the pluralistic dialogue extends beyond the educational system qua system, when hypotheses are posed regarding the relevance of elements of the educational system to the larger world in which the system resides and when this data is fed back into the system to confirm its validity or modify it, then the system is an open system. *We assume that the Model Program can continue to be relevant to the changing world in which it will "live" only if it has a built-in intention, action, feedback structure for processing ideas, generating hypotheses and data regarding the system qua system and the system in relationship to the changing world in which it will exist.*

4. The fourth assumption stems from the previous three. The "product" of this Model Program should be a teacher with the skills, knowledge, and feeling states needed for being an effective elementary school teacher in 1974, yet that "product" must also possess the disposition and skills to change over his professional career so that he will also be an effective teacher in the year 2000. This clearly implies not only a continually changing program to produce self-renewing teachers, but in addition requires the continual inservice training of those who educate such teachers. This model clearly provides self-renewing experiences for teacher educators, so that the program and the teacher educators who staff that program will be responsive to the changing reality of elementary education. *We assume that the development of self-renewing teachers can only be accomplished by a program for the education of teachers that is a self-renewing program staffed by self-renewing teacher educators. This assumes continuing inservice education for the professional staff of the program.*

5. We posit that the self-renewing teacher as we use the term is in part a self-directed teacher. This implies the need for the recognition of human uniqueness. To assume that it is desirable for each student to go through the same educational experiences within the system at the same rate seems to deny human uniqueness. Thus this Model Program is designed as a largely self-paced program that provides multiple opportunities for students to not only learn certain programmatic constants at their own pace, but to explore individual avenues of interest and concern at their own option. *We assume that learning styles, learning rates, and what a person considers important to learn in part constitute the uniqueness of an individual. We further assume that providing a program that recognizes and accommodates these unique differences is one*

way of fostering the development of self-directed, self-renewing teachers.

6. The sixth assumption grows out of our acute awareness of the present state of "cooperation" that exists between teacher training divisions of universities, the public schools, and the developers and producers of educational materials. The word "cooperation" has many meanings as it exists in the minds of those who work in teacher education. These range from, "getting the schools to cooperate with us on our terms", to genuine collaborative efforts that grow from mutual concerns and interests. In between these two points, there are many shades of meaning. To reduce the potential of confusion of meaning we have chosen to use a specific term to refer to the type of cooperation that successful implementation of this Model Program assumes. The term is *protocooperation* and is borrowed from the field of ecology where it has a rather precise meaning. Protocooperation refers to a condition in which two or more organisms in interaction mutually benefit from their relationships with each other, but the relationship is not obligatory. When the organisms are not in interaction no harm accrues to any of the organisms. Since we assume the continued existence of teacher education institutions, public schools and the designers and developers of educational materials (at least in the foreseeable future), *and* since we assume their continued interaction, we propose that *protocooperation* is the term that most accurately describes what we mean by cooperation. *We assume that the optimum functioning of the Model Program described in this report is dependent upon a condition of protocooperation that involves teacher education institutions, public schools, and the designers and developers of educational materials working together in new ways.*

Structure of the Model Program

The Model Program as described in the report is designed as a five year program. The first two years of the program and a substantial portion of the third year are devoted to liberal studies. The term liberal studies includes the conventional liberal arts courses as well as a Liberal Education Component. The term component is defined as a unified set of curricular-instructional experiences that constitute a "curriculum thread" that exists within the program over an extended period of time. The unifying elements of components are derived from the disciplines that they encompass, e.g., the liberal arts, developmental psychology, etc. The Liberal Education Component is the most diversified of all of the program components with respect to a unifying disciplinary structure. It consists of three two-semester courses dealing with: (a) the humanities, (b) the social sciences, and (c) the natural sciences. The three courses of the Liberal Education Component are designed to provide a knowledge integrating function and to provide a medium for the study of contemporary issues of concern to, and processes used by people who work in the humanities, the social sciences, and the natural sciences. This block of liberal studies (the liberal arts and the Liberal Education Component) is designed to provide the student with a large measure of the knowledge and processes that, when translated into the language of elementary school children, become *that which* the teacher will teach to children.

The remainder of the junior year of the Model Program is designed to provide the student with a *pre-professional* introduction to the field of teaching. For the student, the junior year is in one sense an exploration of the world of the elementary teacher. The pre-professional part of the junior year is structured around six professional components. These components are: (a) the Methods and Curriculum Component, (b) the Child Development Component, (c) the Teaching Theory and Practice Component, (d) the Professional Sensitivity Training Component, (e) the Social and Cultural Foundations Component, and (f) the Self-Directed Component. Each of these components is highly process-oriented. That is to say they focus on: (a) *the process of using knowledge and skill in the area of elementary methods and curriculum* for the purpose of resolving teaching problems, (b) *the process of applying observational skill and knowledge of child development theories* in making curriculum and instructional decisions, (c) *the process of using principles of teaching theory* to develop a flexible repertoire of instructional behaviors to be used in teaching, (d) *the process of becoming more aware of self, self as a teacher interacting with children, and self as a teacher who is a member of an organization*, (e) *the process of using knowledge and skill from the social and cultural foundations* to understand the forces affecting pupils, teachers, and American education as well as the process of analyzing the logic of educational language, and (f) *the process of developing a disposition for self-direction as a student and a teacher.*

Each of these components is comprised of a series of instructional modules. A module is defined in this model as a planned instructional episode of a duration ranging from a minimum of several hours to a maximum of several months. Most modules have pre and post performance measures, though some are designed so that performance measurement is continuous. Modules in this Model Program take on many forms including totally mediated instructional episodes and student-directed seminars evolving around student concerns. The largest grouping of students specified in any module is found in seminars of twelve to fifteen students. In many modules the student engages in completely individual instruction.

During the junior pre-professional year, the student learns and applies his learning as he proceeds largely at his own rate through a series of instructional modules that comprise the six professional components. The applications of learning occur in such diverse settings as simulations, tutoring elementary school pupils, and in exploratory micro-teaching. Tutoring and micro-teaching is done in what is referred to in the model as Tutorial and Micro-teaching Centers, staffed by trained clinical teachers (elementary teachers who have had speical training in diagnosis and remediation of pupil-learning difficulties). The Model provides for these centers to be located in elementary schools.

Thus, during the junior year, in addition to an exploration of the world of the elementary school teacher, the student learns a series of professional skills and knowledge that become the foundation for full-time professional study and practice during the senior professional year and the resident teaching year (fifth year). Should the student decide on the basis of the junior year of exploration, that being an elementary school teacher is not for him, provisions are made in the model for the student to continue his college program in some other field without loss of credit.

Should the student decide to pursue full-time professional study for his senior year, he would continue work in modules of the six professional components in greater depth and intensity. During the senior professional year, tutorial relationships with elementary school pupils and exploratory micro-teaching are replaced by a series of increasingly more complex teaching experiences that bring the student step by step to the point of planning, teaching, and evaluating a series of teaching units for which he is responsible. This teaching is done in what is referred to in the Model as Teaching Centers located at the public schools and staffed by trained clinical teachers and clinical professors. The supervision of the student in the Teaching Centers is accomplished through applying the concept of team supervision where generalists (clinical teachers) and specialists (clinical professors) work with the students in a variety of team-planning and team-evaluation sessions.

During the senior professional year, the student makes a decision about a teaching specialization. The specialization could be one as general as nursery school education or the social sciences, or as specific as information retrieval and data processing on children's literature for intermediate grade Mexican-American children. Provisions are made in the Model for the student to explore several specializations before making a tentative decision regarding a specialization of his choice. Assisting the student in the process of thinking through significant problems in elementary school education, finding a problem area that is of interest to the student and then working out a program of studies leading to a specialization in that area is one of the functions of the Self-Directed Component in conjunction with personnel from the other components. Each component provides for open exploration modules to assist the student in choosing an area of specialization.

By the completion of the senior year, the student should have developed skills, knowledge, and feeling states to function as an elementary teacher generalist and gain provisional certification in most states.

The Model provides at this point for another student decision. This decision involves pursuing the program of studies leading to a specialization and becoming a resident teacher for the fifth year of the Model Program. Should the student decide to continue for a fifth year, he would pursue his specialization program during the summers preceding and following the public school year, and engage in half-time partnership teaching at a Resident Center for an entire school year. In this Model, partnership teaching means that two resident students would share responsibility for one classroom for which each would receive half the salary of a beginning teacher. Supervision of the residents would be performed by a team of trained clinical professors who would also conduct seminars, the content of which would be drawn from residents' teaching problems and in many cases would be applicational extensions of the professional training obtained in the professional components of the junior and senior years. The partnership assignment of residents to one classroom would allow for flexible schedules of teaching, participation in special curriculum projects, and independent study in the student resident's area of specialization. The Model makes provisions for the granting of a master's degree or its equivalent upon completion of course work the summer following the resident year of teaching.

In summarizing the program, then, the Model provides for three years of professional study and practice based on a foundation of liberal studies. The three years of professional study and practice are designed as a series of largely self-paced experiences each of which is a successive approximation of the terminal goal of the Model Program--a skilled and self-directed teacher who can meet the demands of teaching at the time of his graduation from the program, but who has developed the disposition and skills for continued adaptation to a certainly changing world that will have substantial impact upon the nature of elementary education and the role of the elementary school teacher. Throughout the program, the Model calls for supporting services of the Self-Directed Component including provisions for counseling advisement and personal exploration of goals, values, and their consequences when acted on in a professional setting.

Supporting Systems

Though this summary is but a cursory overview of the detailed description of the Model Program that is explained in the remainder of this report, the reader must be struck with questions relating to such issues as: (a) the instructional logistical problems associated with a modularized, largely self-paced program that makes use of a variety of instructional experiences located in university and public school facilities, (b) the need for collection, analysis, and storage of information to monitor student progress, evaluate the program and provide data for research, (c) the inservice training of university and public school personnel to staff such a program, and the establishment of a protocooperative organization in which teacher training institutions, public schools and the designers and producers of educational materials share responsibility, resources, and personnel for educating teachers.

The designers of this Model Program are also acutely aware of the potential problems that face an adopting institution. Thus, an integral part of the Model is made up of three support systems without which such a complex teacher education program as the one specified in this Model would "fall from its own weight". These three support systems are: (a) the Program Support System, (b) the Information and Evaluation Support System, and (c) the Organizational Support System.

The Program Support System has three primary functions: (a) the design, development, and testing of instructional modules, (b) the re-design,re-development, and re-testing of instructional modules that when put into operation do not function up to specifications, and (c) providing the necessary maintenance functions to support the instructional program in operation. Each of these,but particularly the re-design function, is dependent upon a variety of information.

The Information and Evaluation Support System has an important role to perform in providing the Program Support System with the information it needs to perform its re-design and re-development functions. In addition, the system is charged with the task of gathering information about student progress and feeding this information back to the student and instructional staff in a form that will be useful in facilitating the student's self-paced progress through the program. A third function of this system is that of evaluating the effectiveness of the program (process) for students with different characteristics (presage) in terms of the program's ability to foster the development of competent, self-directed teachers (product). Finally, it is a function of this system to disseminate findings derived from a study of the experimental program in operation to other teacher training institutions.

The Organizational Support System has as its responsibility the development of personnel (through inservice training) and the development of an organization that can facilitate the attainment of the goals of the Model Program by focusing both on the internal operating structure of the program itself (involving personnel and processes), and its relationship with the larger organizations with which the Model Program would be associated and on which it would be dependent (the total university, the total school system, and the educational industries and/or regional laboratories that would design and develop the educational materials necessary for the program's operation). One of the key functions of this system is to create, over time , a protocooperative federation of diverse institutions that will: (a) profit from such a federation, (b) tap the unique potential that each sector of the educational enterprise has to contribute to the task of educating teachers, and (c) assume mutual responsibility for the education of teachers who in turn will educate the children of our country.

This summary has been a sketch with broad brush of a Model for a program for the comprehensive undergraduate and inservice education of elementary school teachers. Detailed descriptions of the assumptions, program elements, and supporting structures referred to in this summary are provided in the chapters that follow.

CHAPTER 1

RATIONALE AND OVERVIEW FOR THE MODEL

Introduction

The eighteen year old men and women who enter a college of education as freshmen in the fall semester of 1969 will, in the year 2000, be 49 year old teachers with 27 years of teaching experience. During the first half of their professional careers, they may accept as commonplace: (a) varied and reliable drugs for the control of fatigue, alertness, mood and perception; (b) practical use of direct electronic communication and computer simulation of the brain; (c) chemical methods for improving memory and learning; (d) pervasive techniques for surveillance, and the monitoring and control of individuals and organizations; (e) extensive use of robots and machines "slaved" to humans; (f) home computers to "run" the household and communicate with the outside world; (g) the general use of cybernation and automation in management and production, and (h) powerful new "education" and propaganda techniques for influencing human behavior, both public and private.

It is only a matter of speculation whether these or the other 92 technical innovations listed by Kahn and Wiener as "likely to occur" will actually become commonplace by the year 2000.(73:705-32) Yet, innovation, change and speculation about the nature of our future are characteristic of the modes of thought in the late 1960's. The project staff has accepted accelerated change as a fact, and we anticipate, as do Kahn and Wiener,(73) and others such as Shane,(118:67) Kong,(82:71-4) Goodlad,(51:49-51) and Shoben,(119:431-39) that the tempo of change will steadily increase, both in the culture as a whole and in public education in particular.

Of course,we have no way of knowing what the elementary school will be like in the year 2000, or if such an institution will still exist. We feel certain, however, that elementary education will be different, and we are convinced that many changes will have occurred between now and then in the education of children. We strongly believe that the character and quality of future changes can be positively influenced by elementary school teachers who have been educated to initiate and respond in relevant and responsible ways to the challenges of change.

The model elementary teacher education program contained in this report, is in part a response to the challenges of the future. We can only predict in the most general way, the conditions under which elementary education will take place during the next quarter of a century. Our certainty with respect to the pervasiveness of change, however, clearly suggests that one way to make men the master of change is to educate men to react to change in relevant and responsible ways. In other words, educating people (in this case elementary school teachers) in such a way that they react responsibly to the challenges of change.

We have assumed that change will be one of the most significant and pervasive factors in the last quarter of the 20th century, but we cannot foresee the future or predict the nature of elementary education. We have also assumed that a teacher education program can be developed that will prepare future teachers to confront change, to react to it responsibly, to guide it constructively for the welfare of the individual and society, and to initiate change in the institutions and communities in which they will work.

We have made one further assumption; that is, that the goals we hold for the students in the program we also hold for their teachers and for the program as a corporate entity. These goals must be one and the same for all. If the program as a corporate entity and the teachers working in the program, are capable of confronting change, reacting to it responsibly, guiding it constructively for the welfare of the individual and society, and initiating it in the institutions and communities in which the program and the teachers will work, then and only then can we reasonably hope that the students will also have these characteristic capabilities. For us this last assumption is a necessary, although not a sufficient condition to insure that the goals implicit in the model program will be reached by those educated in the program.

It became clear to the project staff as it set the general goals for the model program, that these goals could not be realized in a milieu where the values held for the students are different from the values that pervade the total environment in which the students are professionally educated. We question whether an institution adopting this model program can succeed with all students even if they accept such a point of view regarding a training environment. We believe, however, that such a program can be effective for most beginning teachers if the goals of the program are taken seriously by an adopting institution.

If this model program is fundamentally different or unique, it is because it is designed to educate professional teachers in new ways of (a) perceiving situations, (b) realizing existing alternatives, (c) thinking, feeling and deciding on courses of action, and (d) taking action through new ways of behaving. This is what we mean when we talk of teachers behaving and becoming.

This model program has been created to help develop individuals to: (a) become increasingly perceptive, (b) have a positive concept of themselves as teachers, (c) come to terms with themselves in respect to their motives for becoming teachers, and (d) develop a system of professional values consistent with their personal integrity and the demands of the education profession. The development of such personal qualities is inherent in what we refer to as the process of becoming. If the model program is successful when implemented, the graduates of the program will be sensitive to other people (children and peers), and will be capable of working with them in ways that enhance their unique potentials. The graduates will be committed to the welfare of those with whom they work, and will be dedicated to making significant contributions to the lives of the pupils, and to the institutions and communities in which they work. Lastly, the graduates will be receptive to change; they will be capable of responding to the problems they face by defining appropriate intents, taking action in line with those intentions, and evaluating the consequences of such actions in their own lives and in the lives of others. It is the behavior of intending, acting, and evaluating that we refer to when we talk of behaving. In a world of accelerating change, we believe that teachers with these characteristics will be capable of making continuing contributions to individuals, to the society, and to their profession.

The path that has been chosen for reaching these higher level objectives of behaving and becoming, is to specify personal and professional objectives for the student at the behavioral level. The essence of these higher level objectives is incorporated into the program at the instructional level: first, as operational objectives; second, in instructional situations; and third, as the criteria for the assessment of student performance. The model program specifies its objectives in behavioral terms, provides situations where those behaviors can be learned, and when the behaviors are manifest, assesses their quality and character in behavioral terms.

Many of the higher level objectives have defied the best efforts of the staff to fully specify a program adequate to insure that the students reach them. These are the aspects of behaving and becoming goals which cannot be so specified, provided for, and assessed in detailed programmatic units. Therefore, an attempt has been made to imbue the Model Program (the pre-professional training environment) with the values associated with those objectives. The program must progress toward the same goals that are held for the students. The program staff must utilize new ways of perceiving situations, of realizing existing alternatives, of thinking, of feeling, and of deciding on courses of action, and take action through new ways of behaving. What we are saying is that though many objectives can be specified and directly taught, other objectives (those of a higher level particularly those of becoming) can best be taught by example from the program staff.

To recapitulate, the model program is designed to meet the challenges of change in education by developing elementary teachers who would have: (a) a positive self-concept, (b) a congruent professional value system, (c) a sensitivity to other people and a capability of enhancing others' potential, (d) a commitment to the welfare of those with whom they work, and (e) a flexibility that would allow them to be highly receptive to change. The model program is firmly grounded in the realities of behavioral objectives, real instructional situations, and behavioral criteria for the assessment of performance. It is this model program that is summarized briefly in this chapter of the report. The remainder of the report is devoted to a much fuller explication of the structure of the program, its components, and the support systems designed to facilitate the program's functioning.

The Program

The model for the teacher preparation program described here is a symbolic representation of a reality that exists, in a truer sense, only in the minds of the staff that prepared it. The staff is very much aware that is has developed a model program that can be rather than one that is. We are also very much aware that when such a proposed reality is represented in verbal and visual symbols, the essence of what is real is enhanced at certain levels of understanding and suppressed or distorted at other levels. This document presents a descriptive model that involves people, ideas and artifacts, processes and forces, and ultimately human purposes in their dynamic interaction. This descriptive model helps bring order to the structural and organizational dimensions of a teacher education program, but we have had difficulty capturing the living dynamics that are being proposed as essential to the totality of the program. In an attempt to "breathe life" into words and symbols, a scenario has been included that describes the feelings and behavior of a typical, although hypothetical student as he progresses through the proposed model program.

The program is seen as evolving, and capable of fostering its own "revolutions". The fundamental model is a process model as the basic design of the program will reveal. The working position of the staff has been a pluralistic one, that is, recognizing the inevitability of differences in teacher education and the potential value of such differences for the generation of new knowledge, feelings, skills, and professional practices. We view the program as an open "system" capable of drawing energy from its environment and utilizing that energy within itself to generate new creations and adaptations. Indeed, the proposed program is conceived of as being as much a generator of new purposes, new actions, new meanings, and new practices, as it is a description of objectives, learning experiences, assessment practices, and organizational structures.

The Dynamics of the Model

As has been stated, the basic design of the program embraces the reality of the pluralistic nature of teacher education, and calls for a process model to respond to that reality. These are the functional expressions of and the operational statements about what people and the program will do. Unless these processes characterize the model program as a corporate entity and as a functional system in the world of teacher education, they will not characterize the graduates of the program. To conceptualize the essential dynamics of the model and provide the basis for explaining it to the reader, the project staff has drawn heavily from the work of Ross Mooney with respect to life-giving systems.

> "What is the nature of life-giving systems? They operate as systems, open to their environment, integrative of their being, in transactional give-and-take of energies across their borders, selectively forming fresh fittings in creative transformations

(adaptations, creations) as time passes. This construction may be represented as follows: (Figure 1.1) a broken circle to suggest an open system, integrative in its nature, with an arrowed infinity sign at its borders to suggest the continuous give-and-take with the environment, and then, at each end of the infinity sign, a cupped portion with plus, minus, and equals signs to suggest transformations through selective fittings. This may be taken to symbolize any living creature, from the simplest organism up to man--laying out a set of operations which need to be comprehended in their interlocked relation if the system is to be grasped as living:

1) the organism receives inputs of energy from its environment
2) the organism transforms these inputs toward output of the system
3) the organism send outputs of energy into the environment
4) the environment receives these outputs of energy
5) the environment transforms these outputs toward inputs useful by the organism
6) the environment sends inputs back into the organism" (99)

Such a life-giving system "is a reciprocating feedback system: integration occurs at each end, both within the organism and the environment; a break in the sequential flow of the system means deprivation or death; and what the organism does has to be fitting to the environment and what the environment does has to be fitting to the organism.... There is a forward direction for development and that development is systematic." (99)

The model program is designed to be responsive to its environment in a way comparable to that in which Mooney portrays the responsiveness of a life-giving system. For him the system is open to its environment, integrative of its being, transactional in the give-and-take of energies across its borders, selective in forming fresh fittings in creative transformations (adaptations, creations). The Mooney model takes form in this model program in intent-action-feedback processes, problem resolution, decision-making, the confrontations of a pluralistic reality, new ways of becoming (perceiving, thinking, feeling, deciding) and new ways of behaving (having intentions, acting on those intentions, and using feedback to evaluate and modify future behavior).

The program has been anchored in a behaviorally manifest context. The intent-action-feedback process model has been adapted from the Mooney conceptualization. A pluralistic environment has been posited

Model of a Life-giving System

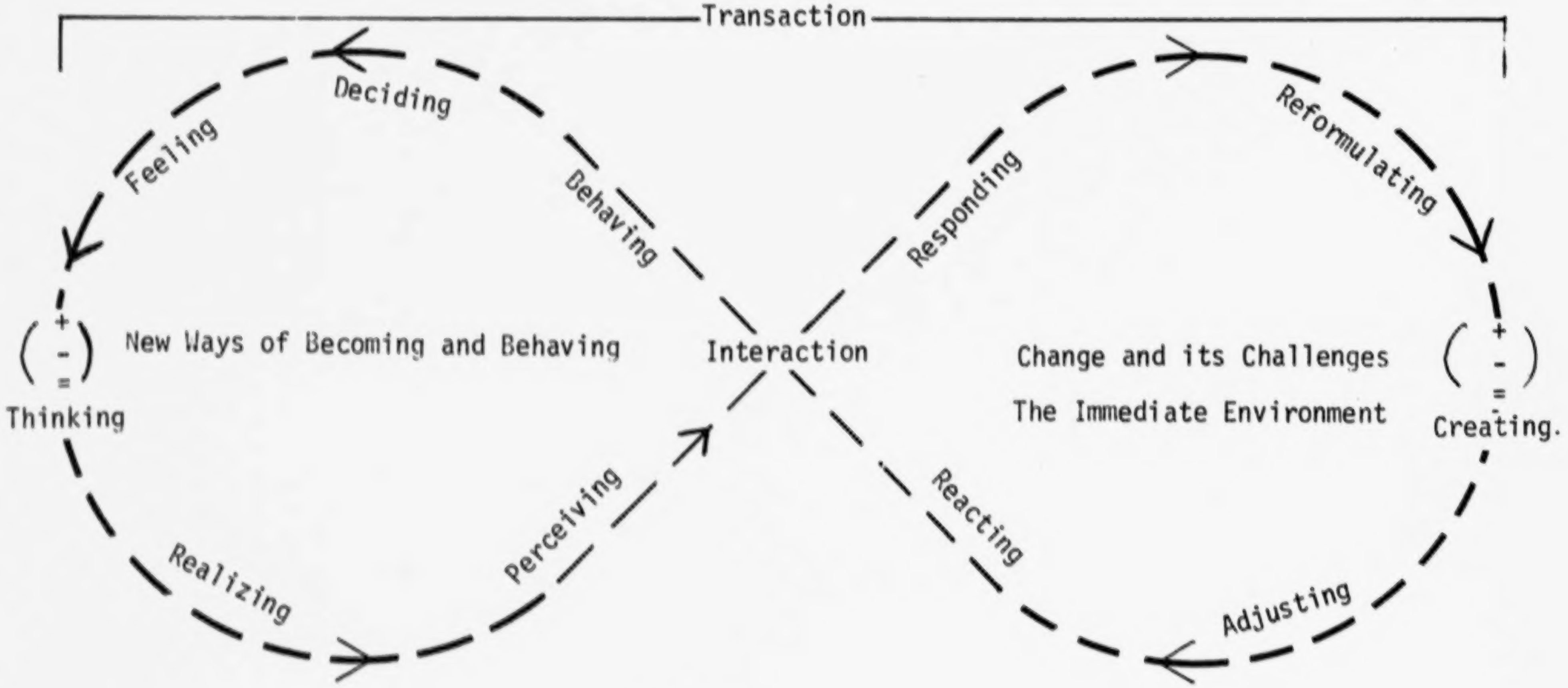

Transaction
Deciding
Feeling
Behaving
Responding
Reformulating
(+ -) =
Thinking
New Ways of Becoming and Behaving
Interaction
Change and its Challenges
The Immediate Environment
(+ -) =
Creating.
Realizing
Perceiving
Reacting
Adjusting

Figure 1.1

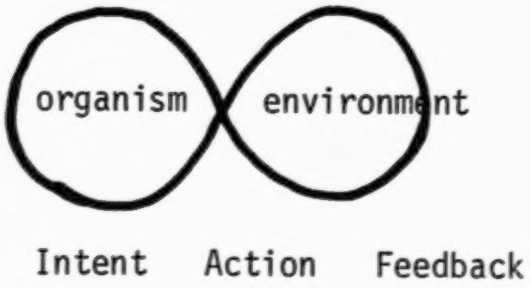
that will call for "transactional give-and-take of energies" and necessitates the generation of "fresh fittings and creative transformations". In short, the program is an attempt to operationalize the Mooney concept of a life-giving system in a teacher education program. The language is different, yet the intent is the same. The model program will be successful only insofar as it has the "life-giving qualities" referred to by Mooney. For students, teachers, and the total program, there must be open systems that are integrative of their own beings, in a transactional give-and-take of energies across their borders, selectively forming fresh fittings in creative transformation as time passes. Only in this way will the program meet the challenges of change and be "life-giving" rather than "death-dealing" in teacher education.

As the project staff studied the work of Mooney in relation to its own efforts, it became apparent that there was a direct relationship between Mooney's conceptualization and our intent-action-feedback process. As we pushed this relationship in respect to the model program, we found we were providing helpful modifications in our intent-action-feedback model. This strongly encouraged our pursuit of a self-pacing quality in the model program, and encouraged a more open stance with respect to differences of view on the educational process.

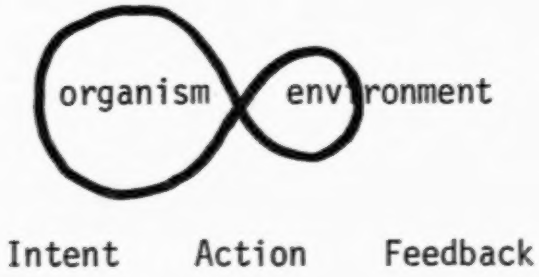
In the Mooney model, it is the transactional give-and-take of energies between the system and its environment that generates the power to form fresh fittings and creative adaptations. In the model program, it is the transactional relationship between intents, actions, and outcomes that generates new meanings, new intents, new actions and new outcomes.

The intent-action-feedback process model is a model calling for a meaningful or transactional give-and-take with the environment, with the assumption that only in such an interaction can the new creations and adaptations necessary for a "life-giving" teacher education program be generated. The model demands that the students, teachers and the program as a whole take action--"kick the world and have the world kick back". The model is an action model, and as such, is highly appropriate for professional teacher education. The professional life of the students will be spent in action settings where they will "kick their world", constructively we hope, and get "kicked back" in a way they can profit from, we hope. There will be continuing transactional give-and-take.

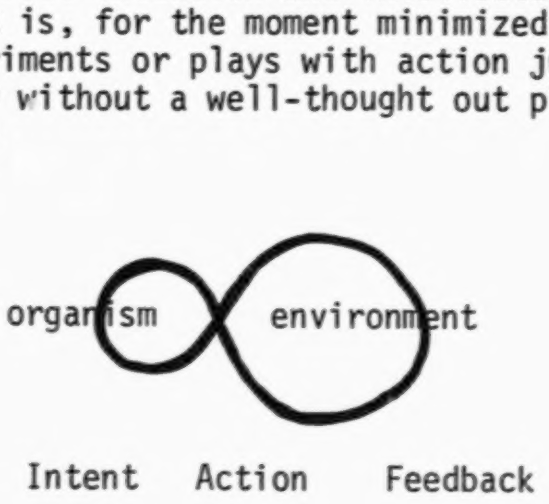
Although this is so, it does not mean that the program should be composed of an unending series of confrontations with the real world. To demand that the model program be forever balanced throughout with equal emphases on intent, action, and feedback, would be to deny extensive reflection and intellectualization. It would deny free spontaneous experimentation and the opportunity to wonder at results which occur when one does not carefully define intents and actions. For educational purposes a balanced model would provide an experience too intensive on a continuing day-after-day basis:


organism
environment
Intent
Action
Feedback

There needs to be a time to pull back, think, feel and reflect about the real world environment. We conceptualized those experiences as:


organism
environment
Intent
Action
Feedback

where contemplation about intention and intellectual action are paramount and external feedback is, for the moment minimized. There needs to be a time when one experiments or plays with action just to see what will happen; to act freely without a well-thought out plan. We conceptualized these experiences as:


organism
environment
Intent
Action
Feedback

where action and feedback are paramount, and contemplation and analysis are, for the moment, minimized.

As the project staff pursued these ideas, it became clearer that our model program, although designed ultimately to educate teachers capable of a fully balanced transaction with their professional environment, would have to allow for highly reflective educational experiences only loosely tied to action and feedback demands, as well as highly experimental types of experiences consisting more in the discovery of what the real world has to "feedback" than in trying to "move" that world forward with actions controlled by refined intents.

The component descriptions in later chapters of this report demonstrate what this means in terms of the proposed educational experiences. For now we need only say that a pursuit of the dynamics of the Mooney conceptualization supported our belief in a self-pacing program, and encouraged us to open even more fully our stance with respect to the diversity of positions held by responsible people about the education of teachers.

Though the dynamics that are inherent in the proposed program are difficult to communicate in visual symbols and words, hopefully, we have at least emphasized that the program must have the qualities of the "life-giving systems" proposed by Ross Mooney. Our program attempts to specify such a life-giving system in operational terms. Its rationale rests upon an adaptation of the intent-feedback process model adapted to the Mooney conceptualization. As the model program developed in the pluralistic environment of a working group of teacher educators, this life-giving system became increasingly relevant in the phenomenological and operational senses. We believe the world of teacher education can work and be conceptualized as a life-giving system. The potential adopter of this model program should hold a similar position. If this position does not feel comfortable, then certainly there are many other models to choose from.

Program Design

As has been said, the basic operating concept on which the program is built is an intent-action-feedback-process model. Each instructional module, each component, and the total program functions within the demands of this concept. The model is an open model capable of accommodating and working constructively with all diverse views as can be expressed in terms of: (a) purposes or objectives (intent), (b) courses of action and actions (action), and (c) assessment and evaluation of outcomes (feedback). The process dimension of the model demands that the program modify its intents, actions and feedback processes on the basis of its own experiences. The model, then, has the potential of reconstructing the experiences of the students, the teachers, and the program as a corporate entity.

The model-building staff is conscious that is has dealt realistically with the world of teacher education by accepting a position of pluralism. Teacher educators have differing views. Public school teachers and college professors have differing views. Organizations and institutions working in teacher education, from public school to educational industries to the United States Government, have differing policies and practices. These are the realities of teacher education today, and we are convinced that this is the way the "world is" and perhaps the way it should be. The model program not only accepts this as a reality because it is so, but embraces that pluralistic position because we believe that it is eminently capable of developing new and better solutions to the problems induced by change when it is harnessed in appropriate processes and responsible behavior.

The model-building staff is aware that the design of the program deals with the processes of reality by imposing a scientific model. The process is one of intending (hypothesizing), taking action (experimenting), getting feedback (measuring), and further utilizing these results to derive new understandings and purpose, new intents and new courses of action. Such a scientific model runs the risk of being interpreted and used purely as a technological rationale. It runs the risk of dehumanizing the program and the people who are products of the program. *This is a hazard and a critical one.* This is *not* our intent.

With respect to that hazard, the project staff holds that the intent-action-feedback process model is the processing *tool* for the program. It is not an end in itself, nor is it a method for the sake of method. It is a method for dealing dynamically, constructively, and humanely with change. As the scientist is the master of his method, so must the teachers of such a model program be masters of the intent-action-feedback model. It then becomes a tool, and a tool to be used for constructive humanistic ends. The program goals are set by people for people and in terms of their welfare. The model is intended to serve these human ends.

In review, the model program is designed to capitalize on a pluralistic position which embraces the many advantages of the reality of teacher education today. It is designed to capitalize on an essentially pragmatic and scientific model for processing human experience and coping effectively with the demands of change.

The model program is seen as functioning according to the following patterns. The demands of a changing world will make demands on the program for some kind of relevant response. In the pluralistic situation, we believe there will be a diversity of proposed responses relevant to the situation. This diversity of possible responses will lead to confrontations in an open, inquiring climate. The better alternatives should ultimately prevail. These alternatives will be translated into what have been defined as responsible behaviors, and are characterized as:

A.	Intending	Intent
B.	Acting on the basis of the intention	Action
C.	Accounting for the consequences of the action	Feedback
D.	Using the results of the accounting to modify future intents and actions	Process

If this model program is to work, the combination of a pluralistic position and the intent-action-feedback process model must pervade the program as a corporate entity. If it does so pervade the program when the model is implemented, we believe that it will ultimately pervade the professional lives and actions of the teachers and students. They should become increasingly open, increasingly capable of inquiring about the real world with which they are working. If this "takes", as the model builders believe it will, both the program and the people associated with it will become increasingly capable of responding to change now and in the future.

The Components of the Model Program

The model program is designed as a five year program. The first two years are devoted to liberal studies. The junior year begins exploratory professional study and continues liberal studies. The senior year is devoted to full time professional study. The final year, including the summers preceding and following, is seen as a resident year and a period for developing and refining: (a) skills and knowledge learned in previous years, and (b) a specialization that is unique for each student.

The seven components of the program are integrated into the basic design of the total program. These components are: (a) Liberal Education, (b) Methods and Curriculum, (c) Child Development, (d) Teaching Theory and Practice, (e) Professional Sensitivity Training, (f) Social-Cultural Foundations, and (g) a Self-Directed Component. The staff developing the model composed of these components provided an excellent test for the workability of the pluralistic assumption about the nature of reality in teacher education. The components are diverse in nature and character. The full range of their diversity will be more apparent in subsequent chapters of this report which spell out each component more fully.

Figure 1.2 shows the seven components as they would appear during the five years of the model program. The Liberal Education Component (in conjunction with additional liberal arts studies) constitutes the entirety of the freshman and sophomore years and roughly half of the time of the junior year. The six professional components begin during the junior year, and with the exception of the Social-Cultural Foundations and Self-Directed Components, conclude at the end of the senior professional year in so far as formal study is concerned. The student would spend the summers preceding the fifth year (resident year) pursuing a specialization in the field of elementary education. The resident year would be a year of half-time partnership teaching and half-time study. The structure of the five year program and its relationship to various field experiences is discussed in detail in Chapter Two.

Liberal Education Component. The Liberal Education Component consists of eighteen hours of liberal education (to be supplemented by varying

Overview of the Five Years of the Model Program

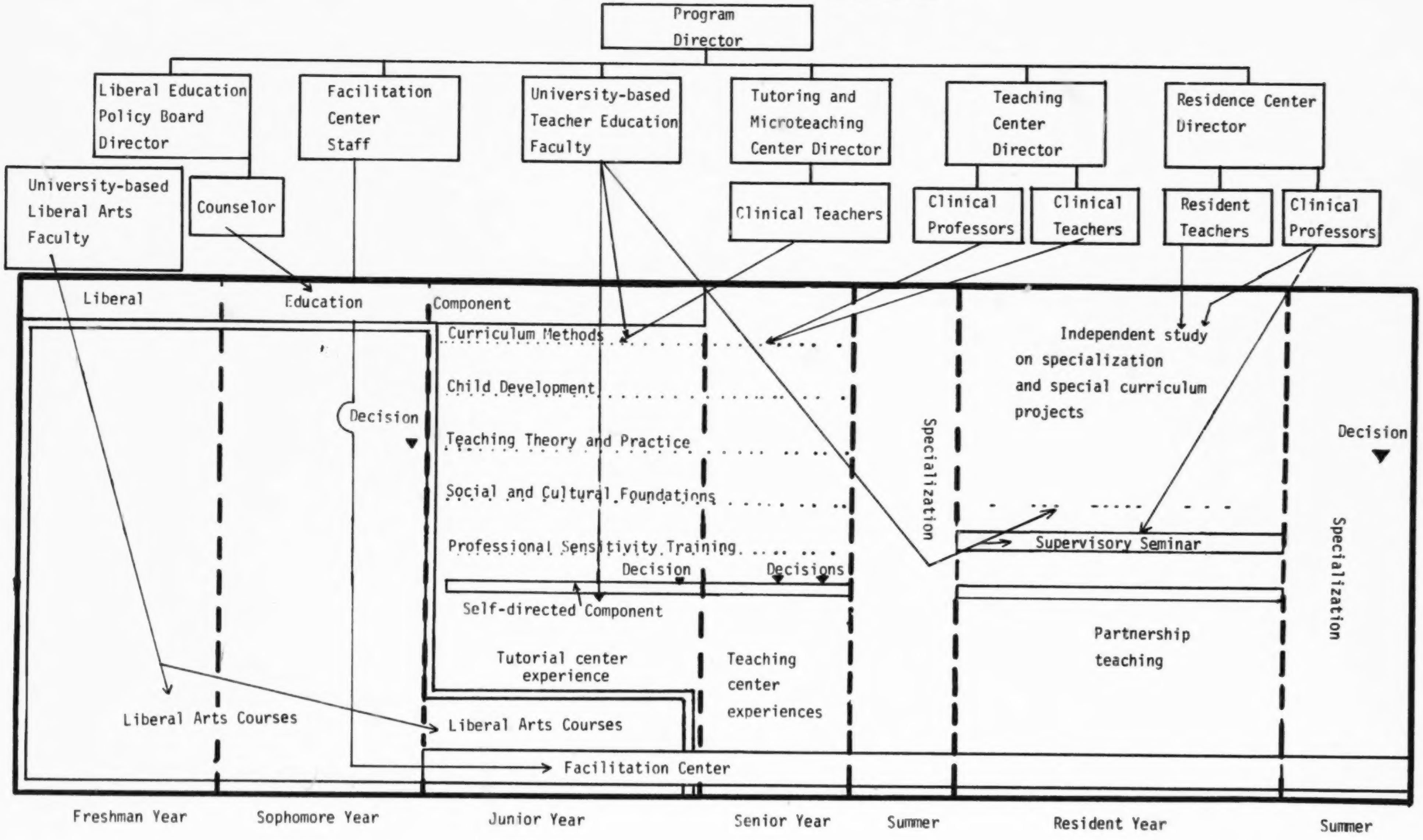

Program Director
Liberal Education Policy Board Director
Facilitation Center Staff
University-based Teacher Education Faculty
Tutoring and Microteaching Center Director
Teaching Center Director
Residence Center Director
University-based Liberal Arts Faculty
Counselor
Clinical Teachers
Clinical Professors
Clinical Teachers
Resident Teachers
Clinical Professors
Liberal
Education
Component
Curriculum Methods
Child Development
Teaching Theory and Practice
Social and Cultural Foundations
Professional Sensitivity Training
Decision
Decisions
Self-directed Component
Tutorial center experience
Teaching center experiences
Decision
Liberal Arts Courses
Liberal Arts Courses
Facilitation Center
Specialization
Independent study on specialization and special curriculum projects
Supervisory Seminar
Partnership teaching
Decision
Specialization
Freshman Year
Sophomore Year
Junior Year
Senior Year
Summer
Resident Year
Summer

Figure 1.2

hours of liberal arts education depending on the requirements of the adopting college). These eighteen hours are divided as follows: six semester hours devoted to two semesters of work that deal with "Changing Perspectives in the Humanities"; six semester hours of work devoted to two semesters of work dealing with "Changing Perspectives in the Social Sciences"; six semester hours devoted to two semesters of work dealing with "Changing Perspectives in the Natural Sciences". Each of these three two semester courses are designed to create a unified liberal education component that will be taught by a staff of professors representing different disciplines in the broad area covered by each course. The courses should be a combination of lectures and seminars supported by an academic advisory system to assist students in their course work and in integrating this work with other aspects of their education both professional and nonprofessional.

The goals of the Liberal Education Component are similar to the goals of the liberal arts. This component should help to "free" students so that they may transcend ignorance and limiting specialization. The component should enable students to perceive themselves and the world in new ways, to realize the existing alternatives in given situations, to think, feel, and decide on a reasonable basis. The component is predicated upon the assumption that it is the "operation" through which these liberal disciplines proceed that has much to do with liberating the human condition. The goals are, therefore, predominantly process goals; transcending ignorance by acquiring new ways of perceiving, realizing, feeling, and deciding rather than the product goals of knowing anthropology, physics, religion, etc.

Elementary Methods and Curriculum. This component will engage the student in problem resolution. The term "resolution" is used rather than solution because resolution implies a continuing process whereas solution implies a final disposition of the problem. In teaching, problems are acted upon in such a way that their nature changes, and the change requires a new course of action. In a world of rapid change, the mastery of the processes of acquiring and utilizing knowledge and skills is far more important than the specific knowledges or skills acquired. The professional who can apply effective approaches to new problem situations is better off than the professional who has been educated, intentionally or inadvertently, to try to make new problem situations fit the old approaches. The approach through problem resolution dictates no particular method of instruction. It does ask that the student develop or request instructional techniques that relate to the nature of the problem.

The Methods and Curriculum Component is constructed in terms of modules. The modules deal with both the content of the five general areas of elementary school subject matter (language arts, reading, social science, science, and mathematics) as well as with the teaching methods associated with them, and methods of student appraisal.

The primary goal of the Methods and Curriculum Component is basically a process goal. The student is to be educated so that he may confront problems and resolve them. The secondary goal is one of providing basic understandings and skills to assist students in the resolution of professional curriculum and methodological problems in elementary teaching during training and in his initial years of full-fledged professional teaching.

Child Development. The objectives of the Child Development Component focus on the concerns of sensitivity, and creating awareness in teachers for their prime concern: the children they teach. It reaches beyond sensitivity and awareness, however, as it helps the student understand the meaning of children's behavior.

This component is not constructed along course lines. It consists of a carefully-developed sequence of modules which will begin in the junior pre-professional year and conclude in the senior professional year. A central focus throughout this component is an active involvement of students in describing and analyzing child behavior. Techniques, theories, and normative information from the child development area have been selected, and are utilized on the basis of their pertinence to this effort.

There are three major developmental and closely related goals for the Child Development Component. First, it is intended that the student will become aware of the value of carefully and "objectively" observing child behavior. Second, the student will learn to discriminate between kinds of behavior observed, and will increase the number of dimensions which are observed. The third goal is to increase the student's repertory of possibilities for attempting to "make sense out of" and respond appropriately to observed behavior. Inherent in these goals is the assumption that if the teacher becomes attuned to "taking in" child behavior, is cognizant of many dimensions of children's behavior, and has some alternative means of considering the meaning of that behavior, then teaching will generally be affected in positive ways, and the teacher will respond to children more appropriately.

Teaching Theory and Practice. This component views teaching as a decision-making process in which the teacher examines many facets of his environment and the possible outcomes, and establishes a course of action for himself and his pupils. Teachers make plans for both long and short range activities -- for the global objectives of education as well as the moment-by-moment decisions needed -- as they are in dynamic interaction with their students. This process of decision-making is a three phase process, and the Teaching Theory and Practice Component is predicated upon it.

The component is modular in construction and extends from the junior year into the senior year. Like the other components it is closely articulated with the other professional components in the model program.

The basic goal of this component is to enable students to make wise, non-substantive teaching decisions. In order to do this the component will help the student (a) discriminate between increasingly finer differences in teacher behavior as displayed by other teachers, (b) practice teaching behaviors in order to develop a wide repertory of behaviors, (c) examine the range of objectives of education and prepare measurement techniques to assess their achievement, (d) interpret and apply the results of research on the effectiveness and strategies of teaching as they relate to achieving specific outcomes, (e) practice the decision making skills, especially those of "searching" for the potential behaviors and strategies most effective for particular pupils working for specific objectives.

Professional Sensitivity Training. This component is specifically concerned with the development of the student's understanding and skills relevant to the dynamics of intra-personal and interpersonal, group and organizational interactions, in terms of himself as a teacher and these other focal points of reference.

This component is organized in terms of modules of learning experiences, and these are developed around readings, seminars, and T-group experiences. The modules begin early in the junior pre-professional year, and the final module is to be completed before the end of the senior year. Three groups of modules comprise the component. The first focuses on the understanding of self as a person. The second group focuses on developing understanding and skills relevant to the role of the teacher in the classroom. The third modular group is intended to increase student awareness of self as a member of the educational system.

The three major goals of the component are developmental in nature. Awareness of self as a person is the fundamental goal. It is assumed that the student is best able to increase his sensitivity regarding his role as a teacher, the second major goal, after he has acquired a sufficient understanding of himself as a person. The third major goal is to help the student become aware of his role as a professional in the school organization and the total educational system. It is these goals of awareness and sensitivity which will help the student become open to and responsive to change. As he better knows himself and knows his role, he can cope more securely with the dynamics of change.

Social-Cultural Foundations. The Cultural and Social Foundations Component consists of five groups of modules. The component has a minimal input during the junior year of the program. In fact, this component's role in the pre-professional aspect of the program would be primarily to give beginning teachers enough understanding of the social and cultural dynamics of the classroom and the school as a social institution to make their pre-professional training phenomenologically real. The "intellectual problem approach" to the study of education tends to disturb students who are highly anxious about their ability to live with the everyday practical problems of teaching. It is assumed that during the senior professional year this anxiety about the ability to perform adequately as a classroom teacher will be reduced by the "reality testing" furnished by the participant-observer field experiences. At this time the student should be able and willing to "stand back" and reflect upon the educational institution in which he will participate as a professional, upon the forces which shape that institution, and upon the social and cultural factors which influence his behavior and the behavior of the pupils he seeks to teach.

The pattern of increasing the intensity of the social and cultural foundations input during the senior professional year will be repeated during the latter part of the resident year after the students are past the initial anxiety of assuming responsible teaching assignments. Social and cultural foundations work during the resident year will include a major focus on the application of skills and understandings to an analysis of the social, economic, and political forces operating in the school system in which the students are teaching.

Throughout the three years of the program, the Social and Cultural Foundations Component would be designed to assist the students in understanding the institution of education in American culture and in addition (in interaction with the other components) assist the student to more accurately (a) view self in group and organizational interactions, (b) view the teaching act as more than a set of technical skills, and (c) understand the forces which legislate for and against curriculum and methodological innovations in the elementary school.

The subject matter of the Social and Cultural Foundations Component will be drawn from the social sciences and philosophy as content and method from those disciplines that are considered relevant for teachers. Concern will not be limited to support and development of technical skills of teaching, but neither will those skills be excluded. The general goals of the Social and Cultural Foundations Component would be to provide experiences which would enable the student to:

1. Understand the social dynamics of educational groups and institutions (the classroom as a group, the school and the school system).

2. Understand the social, political, and economic forces which affect schools and schooling in the United States.

3. Develop skills in the analysis of social situations.

4. Develop skill in the analysis of language as a tool for communication of ideas and influencing the behavior of others.

5. Develop skills in analyzing the value dimension of educational problems and in making value judgments.

Self-Directed Component. This component is intended to foster independent, self-directed activity oriented ultimately toward professional ends. It has considerably less structure than the preceding components particularly with respect to the subject matter which will make up the component. It does have the structure provided by specific goals and the supporting instructional situations which characterize the component. The essential task for the student in this component is to (a) determine what changes he would like to see take place in the children he teaches, (b) describe these changes behaviorally, (c) determine what specialized training is needed (in addition to that provided in other components of the model program) to help him in the accomplishment of these goals, and (d) to accomplish such ends as he has specified with the pupils he teaches during his resident year.

The component provides a firm helping relationship in the performance of this complex task. The student selects a counseling-advisor with whom he works on a regular basis. This relationship between student and counselor-advisor is an enabling relationship combining the talents of the counselor with the talents of a generalist in the field of elementary education. In addition to this one-to-one relationship with a counselor-advisor, the student may participate in one of the student-controlled enabling seminars of about twelve students each. These activities are to be supplemented by a student-controlled weekly newsletter for expressing ideas and concerns about the profession and the program.

The student develops a "planning and goals" paper around which his self-directed activities evolve. He is ultimately expected to realize these plans and goals through his own independent activities. The goals toward which this component work are the goals of professional independence which will enhance the dignity, integrity, and autonomy of the student as a teacher, help him take responsibility for his own learning, and help him to independently modify his own ideas, values, and behavior. From this self-directed activity would come (a) continued increased understanding of the unique qualities of self as a teacher, (b) the development and implementation of a personalized set of educative experiences culminating in a professional specialization that transcends the general training gained in the basic program.

Summary of Components. These seven components are the basic areas around which the model program is built. They represent some of the pluralism referred to earlier. In each, the reader will see an intent-action-feedback character which grossly defines the processes by which these components will be implemented. They are process-oriented first and content-oriented second. There are some further essential characteristics built into each component which help to characterize the components themselves and the program as a whole.

This program is designed to be largely self-paced. The term "largely" self-paced is used because it is recognized that the real world will impose certain restraints. Such restraints are imposed by college scheduling demands, the demands of the outside world on students, instructional logistics, and the restraints involved in the real world of faculty work loads. It is, however, important to see the program as a largely self-paced program, and where possible reduce the restraints that the real world puts on the self-pacing where they are not absolutely necessary.

These components have been organized to incorporate the better traditional teacher education practices with the most promising new approaches to teacher education. This bridging and blending of change with stability through continuity, is crucial to the success of the program; building as it does on the best we know, and openly seeking to use the new. When subjected to an intent-action-feedback process, the program can be continuingly self-renewing, relatively immune to decay, and yet we will always begin where we are, with the best that is available to us. These content and learning experiences are in a unique configuration in the modules and components, but they have the kind of scope, sequence, and integration necessary for a program to have firm impact upon the students.

The model-building staff has stressed throughout that a feedback principle is in operation from the level of the simplest module to the program as a whole. Evaluation, then, as essential to good program construction is pervasive.

Support Systems

This program was designed to function in the real world of teacher education. Those who have worked in that real world know the many roadblocks and difficulties that lie between conceptualizing and implementing a program. Everything and anything can frustrate implementation, from simple scheduling difficulties to maintaining mutual working relationships with public schools and educational industries, and capitalizing on the financial aid afforded by the government and other granting agencies.

In an effort to facilitate implementation and to reduce the frustrations inevitably encountered in a complex task, three support systems have been specified. It is useful to look at these three systems as being three dimensions of task; all are necessarily related "planes" of the whole picture. Each dimension provides useful information for visualizing the whole of the operation, and at any point the three dimensions will coincide in a functional relationship.

The first and most specific of the support systems is the Program Support System which deals with the development and maintenance of instructional and instruction-related activities. The second system deals with the processing and use of information, and is called the

Information and Evaluation Support System. The third and most abstract of the support systems, the Organizational Support System, deals with the roles and relationships of participants in the program. These three systems are designed to function as support for the program and to provide the implementor with guide lines for constructing and operating a teacher education program.

The Program Support System is designed to perform the functions of program development and maintenance. It is this support system that specifies the functions for the instructional staff in designing, constructing, testing, and maintaining the instructional modules of the program. Further, it would be the function of the Program Support System to provide the essential logistical services to facilitate instruction within each of the program modules. Such services include provision for instructional materials, scheduling, maintaining learning environments, providing for encounters in an appropriate field experience, etc.

The Information and Evaluation Support System is charged with four primary roles. The first is gathering data on student performance and feeding this data back to the instructional staff. Such data is essential for the self-pacing of student instruction. Secondly, the modules must be evaluated in terms of worth (both inter- and intra-module) as well as examined for the effect of differential instructional patterns. A third function of this support system would be that of analyzing the effectiveness of components and the total program. By taking into consideration outside conditions or stimuli, the program would continuously meet the divergent needs of the participants, thus insuring the continued smooth and effective operation of the system.

The final function of this support system would be one of research and dissemination. Promising new practices in teacher education and the differential effect of the model program on students of different abilities, talents and personality characteristics are data that the profession of teacher education needs and should have available in a variety of message formats.

The last and most abstract system is the Organizational Support System designed to perform the functions of personnel development and coordination. Analysis of role characteristics and the inservice training of both university and public school based personnel is essential to the development and maintenance of the model program. Organizational considerations that free people to work effectively to perform various functions are a second crucial concern of the Organizational Support System.

The potential adopter of this model program must realize that the program calls for new roles for personnel from the university, public schools, educational industry, and agencies such as the regional laboratories jointly engaged in teacher training. New reward systems and clear role definitions and expectations congruent with evolving organizational structures are as necessary for the successful development and implementation of this model program as is having the appropriate materials of instruction, instructional spaces and field experiences.

Summary

This model of an elementary teacher training program is devised as a self-renewing program capable of training elementary school teachers to meet the challenges in a world of accelerating change. The model program has the potential for bringing to bear a wide repertory of perceptions and behaviors in the resolution of professional problems. When a program or a person meets change with responsible behaviors, he introduces change into the world. He becomes a change agent. The keystone to such efforts is the responsible behavior of intending, acting and evaluating the outcomes of such actions. We would hope that the program would produce its own "responsible revolutions". If it does, its graduates have a better than even change of sponsoring their own "responsible revolutions" in the public schools. The way to meet the challenges of change is to respond creatively and responsibly to change _and_ to induce responsible change. This program is for people who can _do_ that.

What we have described in general is specified in detail in the following chapters of this report. We have tried to adopt a scientific view of the world in order to respond relevantly to that most important fact -- change -- in our day and in the future. On that footing we have taken action and proposed a model program.

Specifically the program presented in this report is designed to:

- utilize much of the best of what we know about the humanistic use of the technology of teacher training today.
- be an open "life-giving" system that functions in a reciprocal relationship with research and development projects and with the system of public elementary education, educational industries and regional laboratories, thus optimizing the potential for continued program revision so that the program can continue to initiate and respond relevantly to the accelerated changes of the last quarter of the 20th century.
- produce teachers who will be trained to be highly adaptive to change in educational practice, and who will in addition, have the skill and knowledge to foment relevant change in the institution of education itself.

The model program has been intentionally designed to make initial use of many more promising ideas in the field of teacher education. Among these are the following:

- professional sensitivity training
- micro-teaching
- simulation
- computer based instruction
- objective analysis of instruction
- largely self-paced, modularized instruction
- video tape feedback of teaching behavior
- programmed instruction
- resident service as a technique for initial professional induction

Though none of these techniques were developed specifically for this model, their use within the program represents a unique configuration of new and promising ideas in teacher education that will be used in conjunction with many of the more traditional, yet sound ideas such as; seminar instruction, observation of live classroom situations, mediated observations of educational settings, exploratory teaching, video tape lectures, and relevant readings in the field of education.

The model program has been built intentionally upon the best that we know today about teacher training, the best that we know about how to keep people and an organization open and capable of initiating and responding to dynamic social change, and with a healthy respect for the implications of predicted future trends that will certainly have substantial impact not only upon the American society but its public schools as well.

CHAPTER 2

THE PROGRAM ORGANIZATIONAL STRUCTURE OF THE MODEL

This chapter provides an overview of the program organizational structure of a model program for preparation of elementary school teachers. The reader should recognize that the organizational structure of the program as it is described in this chapter is illustrative, and would assume different specific forms at different institutions. *The structure, however, assumes a collaborative multi-institutional relationship that would unite three types of institutions in the process of training elementary school teachers*: (a) a university college, (b) the public schools and nursery school operations such as Headstart Centers, (c) the educational industry and other educational agencies such as a regional laboratory and research and development centers (where such agencies are engaged in the development of curriculum and instructional materials).

These three groupings of educational institutions have traditionally had distinctly different functions that were only in part related to the training of teachers. None has as its sole function the training of elementary school teachers. The training of elementary school teachers, though in recent years the principle responsibility of universities and colleges, is but one of the functions of universities and colleges. Indeed it is only one of the functions of colleges of education within universities. Though public schools have long played a service role in the education of teachers, their current primary function is that of educating children and youth. The education of preservice teachers has seldom been accepted as one of the primary functions of the educational industry and the regional laboratories.

With respect to the education of teachers, the relationship between these three sectors of the educational enterprise has typically vacillated depending on the circumstances, between a condition of *neutralism* in which none of the parties involved significantly affects the other, a condition of *commensalism* in which the relationship is essential for the existence of one of the parties, but does not significantly affect the other parties involved, and a condition of *parasitism* in which one of the parties involved in the relationship thrives at the expense of one or more of the other parties involved.

The successful development and operation of this model program requires the creation of a condition of *protocooperation* involving a university or college, the public schools, and the educational industry and/or regional laboratories. The condition of *protocooperation* would be one in which: (a) each party could draw sustenance from its relationship with the others, and would directly benefit from the relationship, and (b) each party would be responsible for a unique, direct and essential contribution to the training of elementary school teachers.*

Though such a relationship could theoretically be worked out so as to preserve the teacher training function of each of the institutions as a discrete entity and preserve complete institutional autonomy, previous attempts to do so are relatively rare, and have not typically had long histories of success. The reasons for this are numerous, and are discussed in some detail in Chapter Fourteen which deals with the Organizational Support System. Though we would grant that a functional informal structure could be developed, a more fruitful approach would seem to be the creation of a formal organization that has as its primary function: (a) the training of elementary school teachers, (b) the study of the process of training teachers, and (c) the dissemination of knowledge about this process to other institutions involved in the training of teachers. One approach could be the creation of a separate corporation, the board of directors for which would be drawn from at least the three sectors of the educational domain referred to in this chapter.

The rationale for recommending this type of organization stems from the belief that a new conception of the organization and structure of teacher education is needed. The current system is badly out of synchronization with the demands of the present, and shows little promise of dealing realistically with the future. The reward systems of most universities and many colleges of education simply do not encourage serious engagement in the training of teachers on the part of the senior faculty. Research, writing, and graduate teaching are the functions that are typically rewarded, not the education of preservice teachers. The public school typically perceives its role in the education of teachers as a service function that is only tangentially related to the preservice education of teachers. Its reward system is built on a different set of expectations for its faculty, staff, and administration. Industry, naturally motivated by profit, has often been inhibited from cooperating as an equal partner in the enterprise of teacher training because of the perception of the motives of industry by both the university and the public schools. Finally, there exists an unfortunate set of both accurate and inaccurate perceptions on the part of people from all three of these sectors regarding the competency, dedication, and motives of the others. These perceptions and misperceptions have traditionally frustrated development of genuine cooperation in teacher training. Lack of trust, lack of respect, and jealously guarded traditional vested interest have too often blocked genuine cooperation and mutually accepted responsibility for the training of teachers. It is hoped that in time the organization proposed in this report would help to overcome many of these problems as personnel from many sectors of the educational enterprise become intentionally and formally dedicated to the common task of training teachers.

---

*The term protocooperation is borrowed from the field of ecology. It is used by ecologists to describe a specific type of interdependence of organisms. Protocooperation differs from mutualism in one important sense. Mutualism implies that the relationship is obligatory while protocooperation does not. In that public schools could exist without universities (they could run their own teacher education program) the concept of mutualism is not applicable.

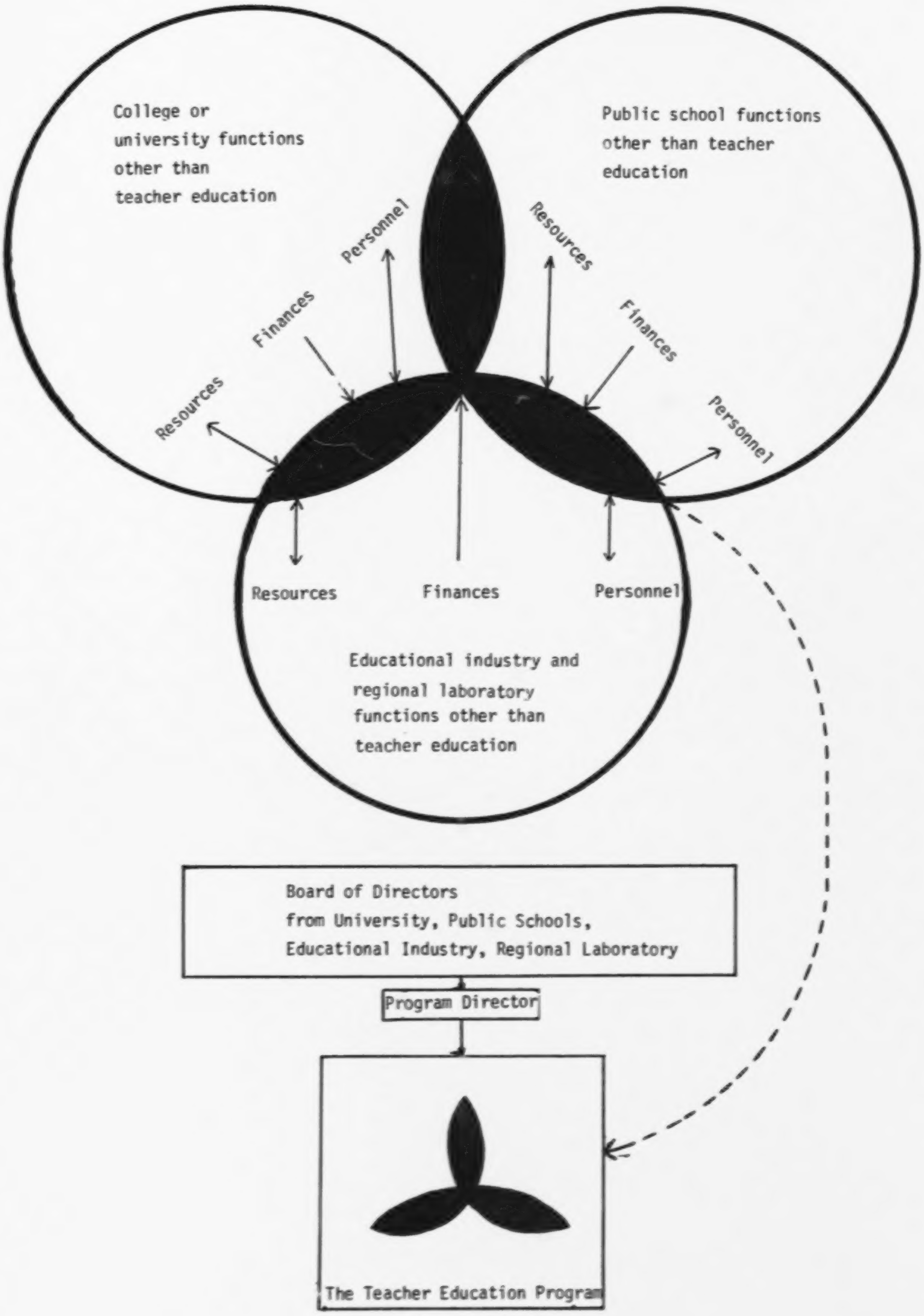
Whether such a condition of mutual responsibility for the training of teachers is worked out in the formal structure of a separate corporation that draws its resources from these several types of institutions, or operates on a less formal basis, is of secondary importance. What is important is: (a) the development of a joint commitment on the part of these institutions to direct involvement in teacher training, (b) the creation of a unique organization to solidify and perpetuate this commitment, and (c) the recognition and reward of people for engaging in the enterprise of teacher education. From the formation of such an organization should come the evolution of the appropriate roles, and the establishment of the appropriate rewards to encourage and perpetuate commitment to the enterprise. Such commitment implies shared responsibility, shared facilities, shared human resources, and shared financial support. The advantages to each from such a condition of protocooperation would be different, but that there would be multiple advantages for each is clear. It is within this context of cooperation that the organizational structure for the Model Program will be discussed.

Figure 2.1 depicts this concept of protocooperation. The overlapping portions of the circle represent activities of the several sectors of the educational world that would be directly related to the enterprise of teacher education. The remaining portions of each of the circles represent other functions of these three institutions that are not directly related to the education of teachers, and though these functions are important, they should not be confused with the central enterprise of teacher education. For many people in the universities, public schools, and in industry and regional laboratories, the commitment of their time to such a teacher training program may be of a long range or relatively short range duration. It may be a full time or part time commitment. However, rewarding people for their participation in this endeavor and clearly separating teacher education and the study of the teacher training process from other functions of these institutions, should be facilitated by such an organization. To fail to do so is to blur responsibility, further perpetuate role ambiguity, and to fail to provide a viable, identifiable organization with the power and resources to reward people for significant participation in the education of preservice teachers.

In the chapters that follow, a rationale and organizational structure is presented in detail for each of the seven program components. Thus, the rationale for components will only be briefly and selectively discussed in this chapter. The primary purpose of this chapter is to provide the reader with an organizational Gestalt that will allow him to put each of the separate program components into an illustrative wholistic perspective. Discussion of program organizational structures tends to focus on abstract relationships and to run the risk of ignoring

The Concept of Protocooperation

Figure 2.1


College or university functions other than teacher education
Public school functions other than teacher education
Personnel
Resources
Finances
Resources
Finances
Personnel
Resources
Finances
Personnel
Educational industry and regional laboratory functions other than teacher education
Board of Directors
from University, Public Schools,
Educational Industry, Regional Laboratory
Program Director
The Teacher Education Program

the ultimate purpose for the program and its organization, i.e., the education of students. Thus, as the reader pursues this chapter he should keep in mind the assumption upon which the model is based: (a) the program is designed to provide opportunities for students to progress through the program largely at their own pace, (b) the program is primarily process-oriented because the model is built for the future--a future for which the necessary specific knowledge and skills that graduates of the program will need can only be speculated upon, thus (c) the program is designed to be self-renewing so that it can grow in an evolutionary way to insure that appropriate content and skills can be continually built into the program, and non-functional knowledge and skills can be easily eliminated (this is one of the prime functions of the Information and Evaluation Support System), and (d) the program is designed to educate technically competent, self-directed teachers who have the disposition to respond appropriately to change and to foment change where appropriate.

The components, their organization and the specific examples of objectives, and instructional activities of their modules represent illustrations, not prescriptions. To assume that this model represents a "package" to be adopted and literally implemented would be to deny the validity of the concepts of pluralism and multi-institutional protocooperation. This model has been developed by a staff from an institution, a university, for some other potential adopter. That adopter should determine the specifics of the program, develop the real operational objectives, develop the instructional experiences and measurement instruments, develop the support systems, and the implementation of the program should be done cooperatively by the people who will be affected by the program. To assume less would be not only to deny the principle of protocooperation, but would in addition violate many of the basic ideas about how effective organizations are developed and nurtured. Many of these ideas are expressed in the chapter dealing with the Organizational Support System.

This report is an illustrated prescriptive model, but what is prescribed is not found in the specifics of the modules, the components, or the program organization. These are but illustrations. What is prescribed is an open, pluralistic system that breaks cleanly from many of the traditions and organizational structures that have made teacher education in so many places less than exciting, less than phenomenologically real. What is essential to the model is a new way of conceptualizing teacher education that proposes to develop a teacher education program and a "new breed" of professionally competent, appropriately self-directed teachers who will not be anachronistic in the year 2000.

The reader will, however, note that the model building team has created a model that can be implemented now. That is, nothing has been proposed that has not already been tried and shown promise. If this model is unique, it is unique because of the way in which the best of the new and old have been conceptualized in a new configuration that takes the form of a model of a program. The adopter of this model will surely want to embellish upon the blueprint. Indeed, it is with this mind-set that the reader should pursue not only the remainder of this chapter but the remainder of the report as well.

Overview of the Organization of the Program

This model provides for a teacher training program that begins in the freshman year with a two semester inter-disciplinary course that deals with "Changing Perspectives in the Humanities". The purposes of this course are to increase the student's awareness of the major concerns, the rival attitudes, and the significant tendencies and discoveries men have experienced in attempting to understand themselves, their relationship with others, and the world in which they live. The second two semester course of the Liberal Education Component, occurring during the sophomore year, would be "Changing Perspectives in the Social Sciences". The purpose of this two semester course would be to bring the techniques of scientific observations and objectivity to bear on the problems of man and his social environment. (Such a course is considered prerequisite for beginning study in the Social and Cultural Foundations Component in the junior year). The third suggested course in the Liberal Education Component would occur during the junior year, and would be entitled "Changing Perspectives in the Natural Sciences". The purpose of this course would be to foster understanding of how the scientist devotes his energy, what his method is, what his limitations are with respect to his findings, and what further knowledge and experimenting he needs in order to make his conclusions valid. As explained in detail in the description of the Liberal Education Component, it is proposed that the staff for these interdisciplinary courses be drawn from the faculty of the university or college at large (including the college of liberal arts, the college of education, and any other such colleges that would have faculty members who could make contributions to such interdisciplinary courses). It is not the purpose of the Liberal Education Component to act as a substitute for a liberal arts education during the first three years of the college career, but rather to provide a series of interdisciplinary experiences that would operate at a conceptual and process level rather than emphasizing the knowledge *per se*. During the remainder of the freshman, sophomore, and junior years, students would complete the basic liberal arts requirements of the adopting college or university and those content requirements necessary for state certification.

The Junior Pre-Professional Year

Near the conclusion of the sophomore year, the student would make a decision about entering the pre-professional exploratory junior year of the program. The junior year of the program should be so designed that upon completion of the pre-professional year, should a student decide to terminate professional study, the academic credit accrued during the junior year could be translated into electives in a college of liberal arts or some other department so that the student could then apply these elective credits to graduation requirements and graduate from the university a year later without penalty.

The program at the junior-preprofessional year has three purposes: (1) to introduce the student to the field of education by exposure to each of the six professional components and by so doing to begin building a repertoire of skills, understandings, feeling states and processes as a foundation for continued professional study during the senior professional and resident years, (2) to provide an opportunity to experience the field of education at both a theoretical and practical level of engagement with elementary school pupils in both tutorial and micro-teaching episodes, and (3) to assist the student in making a decision about whether or not to continue with full time professional study during the senior and resident years. Figure 2.2 represents an overview of the professional components and instructional modules of the junior pre-professional year. The code symbols used in Figure 2.2 are described below. Succeeding Figures 2.3, 2.4, 2.5, 2.6, 2.7, and 2.8 show the modular structure of each of the junior year components in greater detail.

In these Figures (as well as in other figures in this chapter that portray the modular structure and concurrent and prerequisite interlock within and across components) specific symbols have been used to refer to components: CM--Curriculum and Methods, CD--Child Development, TTP--Teaching Theory and Practice, PST--Professional Sensitivity Training, SCF--Social and Cultural Foundations, SD--Self-Directed. The number following the code letters refers to the number of the module. For example SCF-6 stands for the sixth module in the Social and Cultural Foundations Component. The identifying code letters and numbers for each module appears in the upper left hand corner of the rectangle that stands for the module. Thus, this rectangle stands for the third

CD-3

module in the Child Development Component. The description of this module is found in the chapter that deals with the Child Development Component. Four symbols are used to stand for field experiences: Tu stands for a tutorial relationship involving a student and a pupil in the public school, Mt stands for micro-teaching, Te stands for an exploratory teaching experience during the senior year of the program, and Rt stands for the fifth year resident teaching experience. When a symbol is circled, this indicates that a concurrent relationship has been prescribed. Uncircled symbols indicate that a prerequisite relationship has been prescribed.

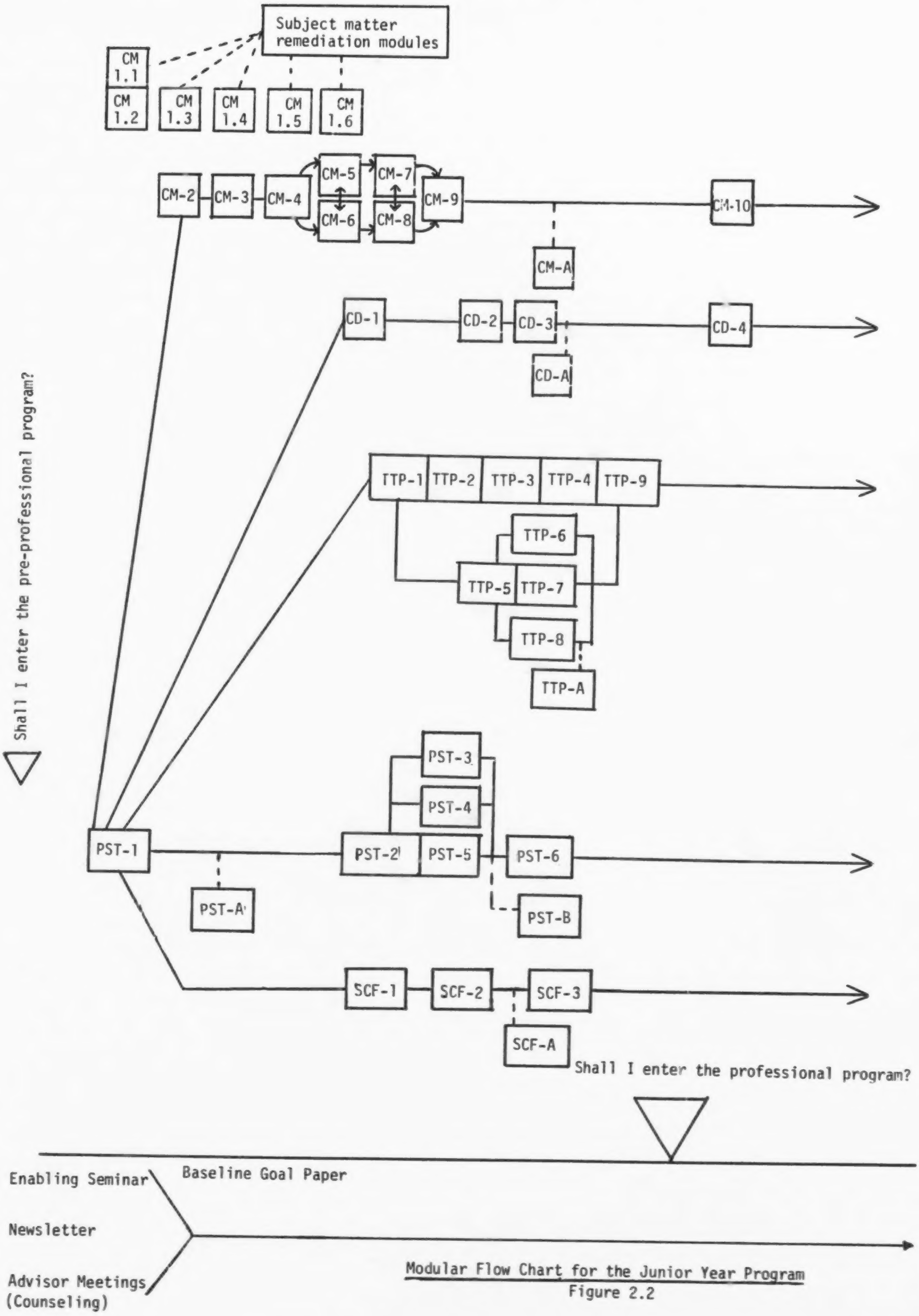
TTP-12 Te
CD-9
TTP-11
PST-7

Thus, Module number 12 of the Teaching Theory and Practice Component (a senior year module) prescribes a concurrent teaching relationship, Te, a concurrent relationship with module number 9 of the Child Development Component, CD-9, and specifies as a prerequisite module number 11 of the Teaching Theory and Practice Component, TTP-11, and module number 7 of the Professional Sensitivity Training Component, PST-7.

When a letter follows the component code symbol, e.g., CM-A it is used to represent an optional module. One additional type of symbol is used in conjunction with the Curriculum and Methods Component. The first six modules of this component are conceived of as a series of subject, content, diagnostic and remedial modules. They have been arbitrarily coded CM-1.1 through CM-1.6. This is because they are seen as a single function in six parts.

The first six modules of the Elementary Methods and Curriculum Component (CM-1.1 through CM-1.6) are designed to perform a diagnostic and remedial function with respect to the subject related knowledge, concepts, and processes needed by elementary school teachers as they make and implement curriculum decisions about what they should teach. If the Liberal Education Component and the student's Liberal Arts education has functioned well, students should be able to "test out" of these modules. However, if for some reason a student is unable to demonstrate a grasp of the knowledge, concepts, and processes of the substantive areas taught in the elementary school classroom, then these modules are designed to provide independent study in the form of programmed instruction to give the student a working grasp of the essential knowledges, concepts, and processes needed for substantive dimensions of teaching in the elementary school classroom. Students would proceed through these modules at their own pace, but they should have "tested out of" or completed the six subject matter content modules by the end of their junior pre-professional year.

It should be pointed out that each of the modules of the program provides for a pre and post measure of performance with respect to the objectives of the module. On the basis of pre-test performance, a student may be asked to: (a) make up deficiencies before starting the module, (b) begin the module with the first instructional experience or enter the module at some advanced point, or (c) demonstrate that he can already meet the objectives of that module and proceed to another module pre-test. Post-tests are provided for each module as are opportunities for

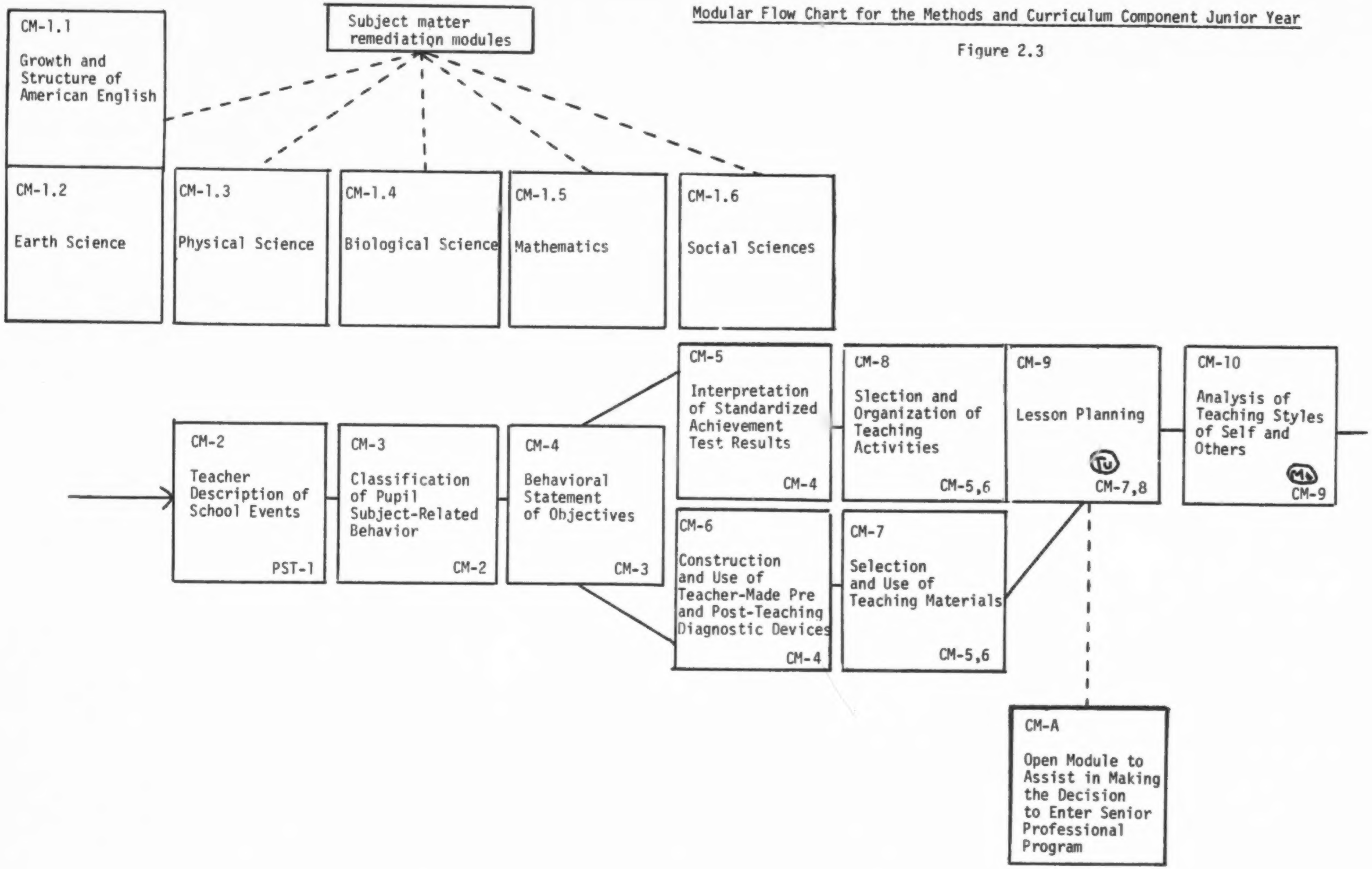

Subject matter remediation modules
CM 1.1
CM 1.2
CM 1.3
CM 1.4
CM 1.5
CM 1.6
CM-2
CM-3
CM-4
CM-5
CM-6
CM-7
CM-8
CM-9
CM-10
CM-A
CD-1
CD-2
CD-3
CD-4
CD-A
TTP-1
TTP-2
TTP-3
TTP-4
TTP-9
TTP-6
TTP-5
TTP-7
TTP-8
TTP-A
Shall I enter the pre-professional program?
PST-3
PST-4
PST-1
PST-2
PST-5
PST-6
PST-A
PST-B
SCF-1
SCF-2
SCF-3
SCF-A
Shall I enter the professional program?
Enabling Seminar
Baseline Goal Paper
Newsletter
Advisor Meetings (Counseling)

Modular Flow Chart for the Junior Year Program

Figure 2.2

Modular Flow Chart for the Methods and Curriculum Component Junior Year

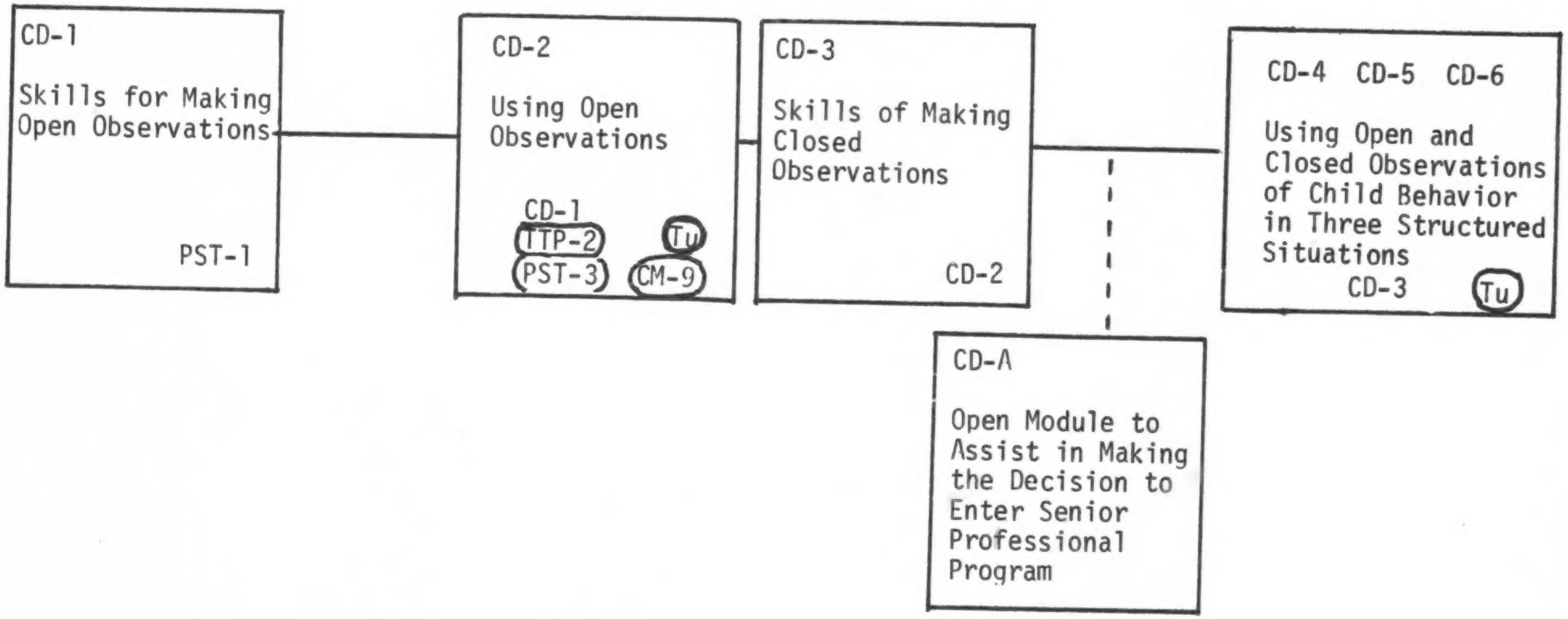
Figure 2.3



CM-1.1 Growth and Structure of American English
Subject matter remediation modules
CM-1.2 Earth Science
CM-1.3 Physical Science
CM-1.4 Biological Science
CM-1.5 Mathematics
CM-1.6 Social Sciences
CM-2 Teacher Description of School Events PST-1
CM-3 Classification of Pupil Subject-Related Behavior CM-2
CM-4 Behavioral Statement of Objectives CM-3
CM-5 Interpretation of Standardized Achievement Test Results CM-4
CM-6 Construction and Use of Teacher-Made Pre and Post-Teaching Diagnostic Devices CM-4
CM-8 Slection and Organization of Teaching Activities CM-5,6
CM-7 Selection and Use of Teaching Materials CM-5,6
CM-9 Lesson Planning Tu CM-7,8
CM-10 Analysis of Teaching Styles of Self and Others CM-9
CM-A Open Module to Assist in Making the Decision to Enter Senior Professional Program

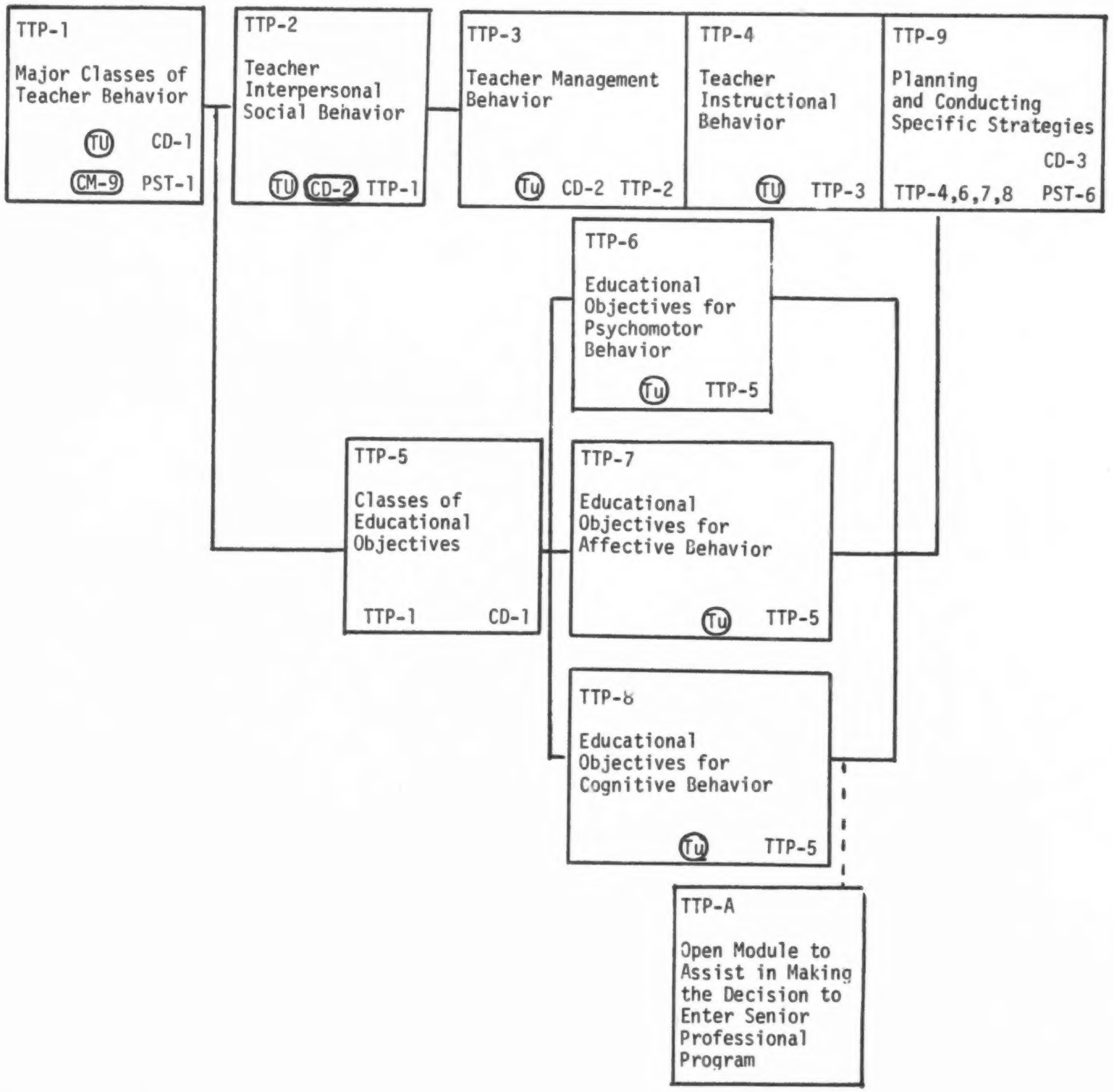
Modular Flow Chart for the Child Development Component Junior Year

Figure 2.4


CD-1
Skills for Making Open Observations
PST-1
CD-2
Using Open Observations
CD-1
TTP-2
PST-3
Tu
CM-9
CD-3
Skills of Making Closed Observations
CD-2
CD-4 CD-5 CD-6
Using Open and Closed Observations of Child Behavior in Three Structured Situations
CD-3
Tu
CD-A
Open Module to Assist in Making the Decision to Enter Senior Professional Program

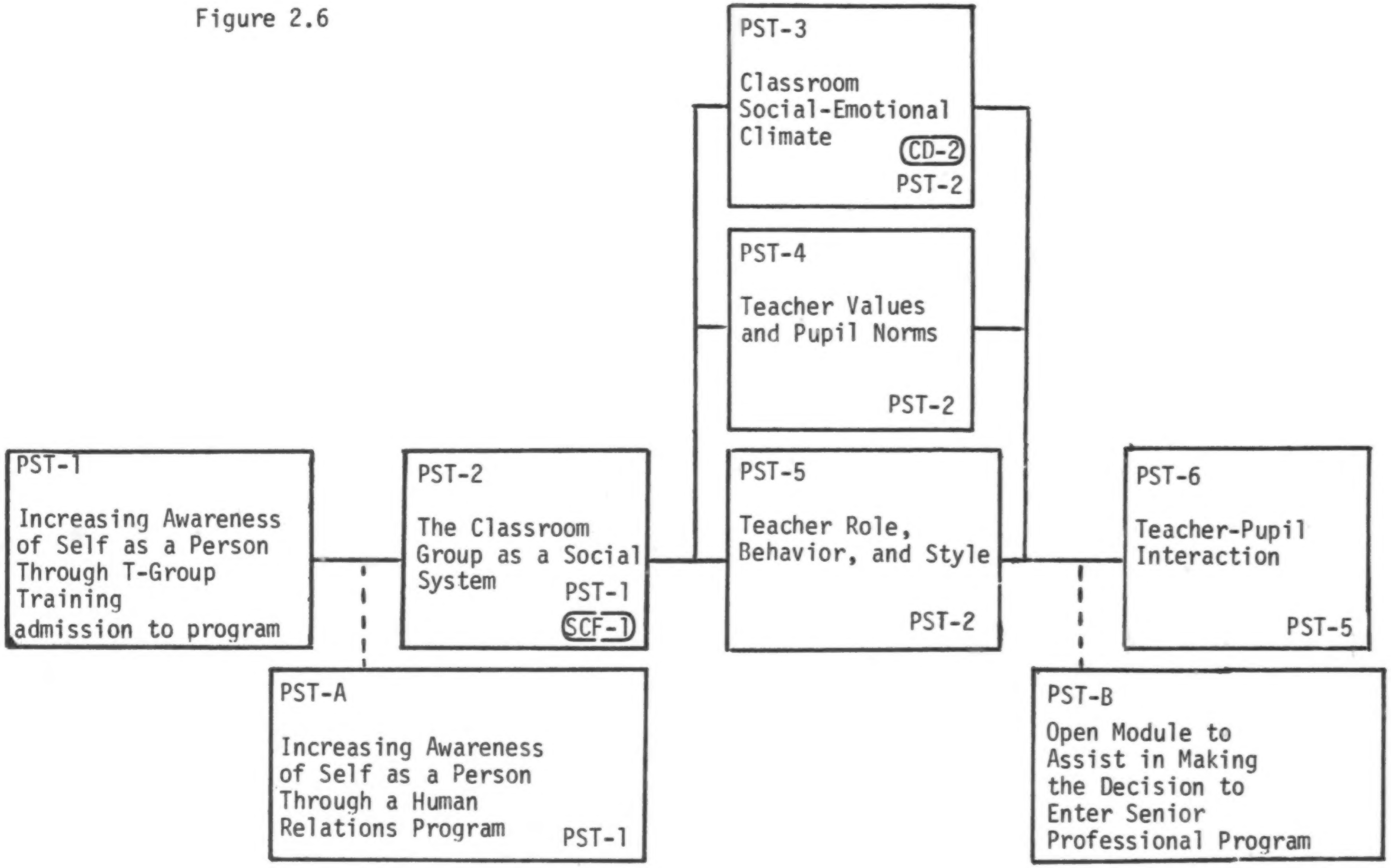
Modular Flow Chart for the Teaching Theory and Practice Component Junior Year

Figure 2.5


TTP-1
Major Classes of Teacher Behavior
TU
CD-1
CM-9
PST-1
TTP-2
Teacher Interpersonal Social Behavior
TU
CD-2
TTP-1
TTP-3
Teacher Management Behavior
TU
CD-2
TTP-2
TTP-4
Teacher Instructional Behavior
TU
TTP-3
TTP-9
Planning and Conducting Specific Strategies
CD-3
TTP-4,6,7,8
PST-6
TTP-6
Educational Objectives for Psychomotor Behavior
TU
TTP-5
TTP-5
Classes of Educational Objectives
TTP-1
CD-1
TTP-7
Educational Objectives for Affective Behavior
TU
TTP-5
TTP-8
Educational Objectives for Cognitive Behavior
TU
TTP-5
TTP-A
Open Module to Assist in Making the Decision to Enter Senior Professional Program

Modular Flow Chart for the Professional Sensitivity Training Component Senior Year

Figure 2.6


PST-1
Increasing Awareness of Self as a Person Through T-Group Training
admission to program
PST-A
Increasing Awareness of Self as a Person Through a Human Relations Program
PST-1
PST-2
The Classroom Group as a Social System
PST-1
SCF-1
PST-3
Classroom Social-Emotional Climate
CD-2
PST-2
PST-4
Teacher Values and Pupil Norms
PST-2
PST-5
Teacher Role, Behavior, and Style
PST-2
PST-6
Teacher-Pupil Interaction
PST-5
PST-B
Open Module to Assist in Making the Decision to Enter Senior Professional Program

Modular Flow Chart for the Social and Cultural Foundations Component Junior Year

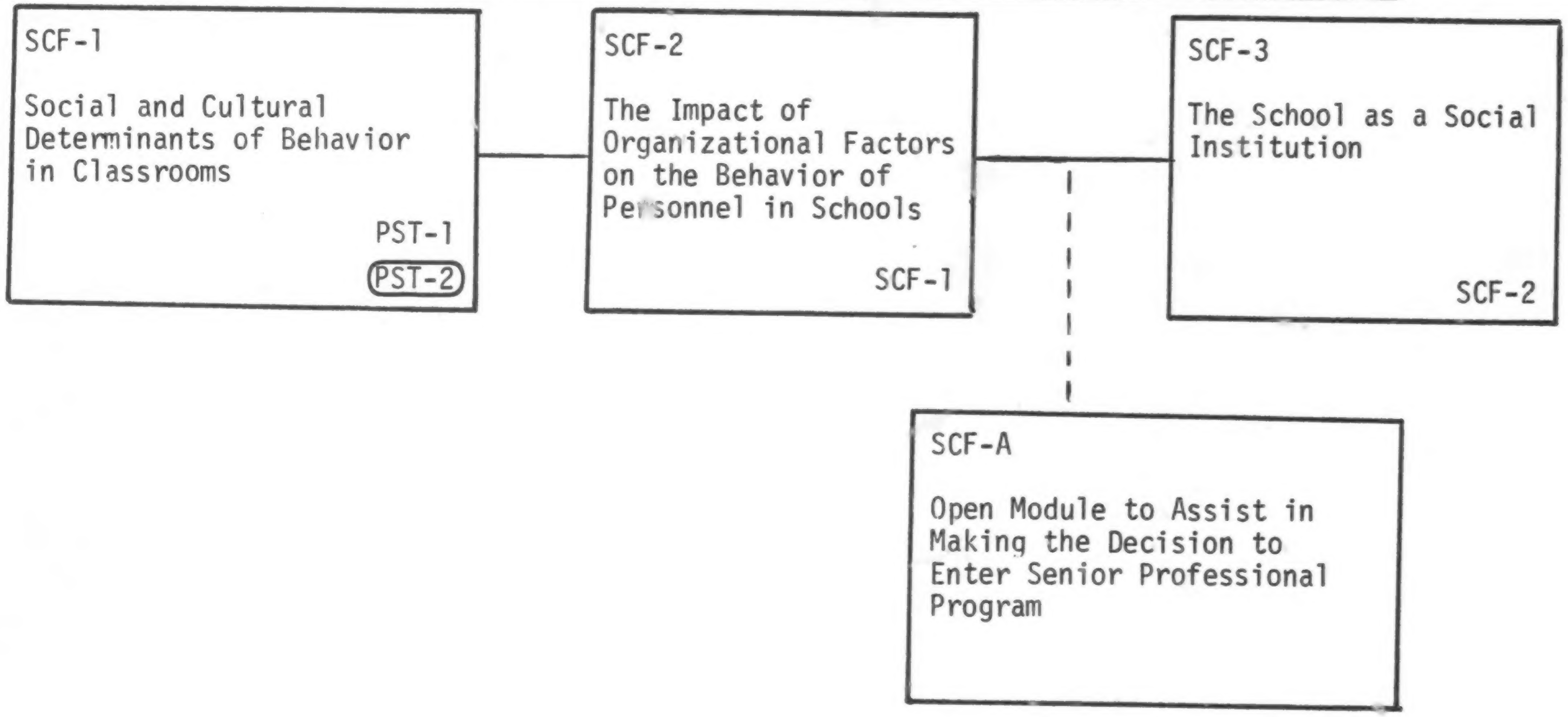
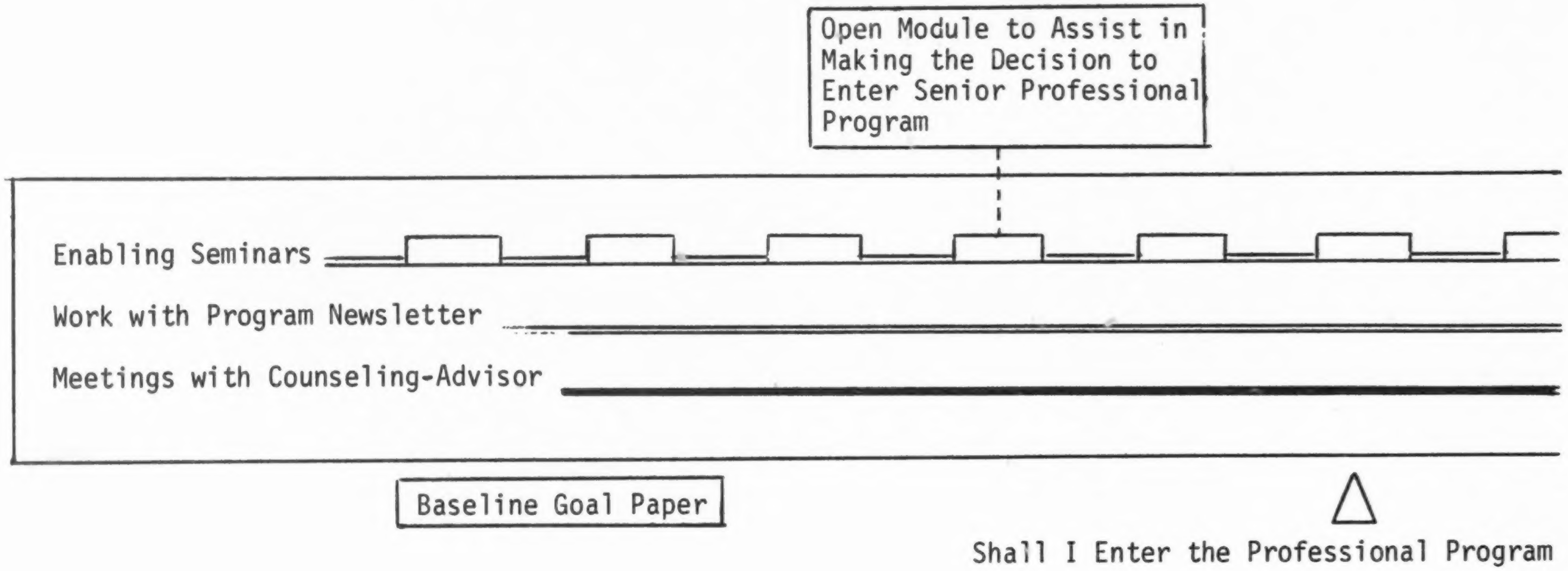

SCF-1
Social and Cultural Determinants of Behavior in Classrooms
PST-1
PST-2
SCF-2
The Impact of Organizational Factors on the Behavior of Personnel in Schools
SCF-1
SCF-3
The School as a Social Institution
SCF-2
SCF-A
Open Module to Assist in Making the Decision to Enter Senior Professional Program

Figure 2.7


Open Module to Assist in Making the Decision to Enter Senior Professional Program
Enabling Seminars
Work with Program Newsletter
Meetings with Counseling-Advisor
Baseline Goal Paper
Shall I Enter the Professional Program

Flow Chart for Self Directed Component Junior Year

Figure 2.8

students to engage in special remedial activities before proceeding on to other modules. The pre and post tests of the modules as well as the remedial activities associated with each module are one means of individualizing instruction and facilitating self-pacing by students.

Though the modules call for a variety of instructional activities--independent work, work in small groups, and participation in seminars--it is not assumed that a student would stay with a particular small group or seminar throughout the program or even a significant portion of the program. Indeed, unless small groups and seminars were continually reconstituted, a given student would be forced into proceeding through the program at the rate of the largest instructional group of which he was a part. Thus it would be not only possible but desirable that students continually change groups and seminars. For example, if three seminar groups in the first module of the Social and Cultural Foundations Component were in operation at the same time, and if one seminar group was proceeding more rapidly through the module than the other two, a student from one of the slower moving seminar groups could accelerate this work in that module, and join the seminar group that was working at a more advanced level.

The pre-professional program formally begins with the first module of the Professional Sensitivity Training Component. This module, entitled "Increasing Awareness of Self as a Person Through T-group Training", (PST-1), is considered as a prerequisite for all additional modules within the pre-professional program. It would be the purpose of this first module to begin helping the student become more aware of himself as a person, thus setting the foundation for future professional personal decision-making, and establishing more functional professional interpersonal relationships.

The next group of eight modules of the Elementary Methods and Curriculum Component (Module CM-2 through CM-9) is designed to provide the student with the necessary skills and understandings to begin an intensive and fruitful tutorial relationship with students in a public school setting. They culminate in Module CM-9 which deals with developing lesson plans for use in actual tutoring of public school pupils.

During the time that the student works at his own pace through Module CM-2 through CM-9, he could be concurrently working with the first module in the Child Development Component (CD-1), the second module in the Professional Sensitivity Training Component (PST-2), the first module in the Social and Cultural Foundations Component (SCF-1), and would initiate his activities with Self-Directed Components, i.e., the enabling seminar and contact with his advisor.

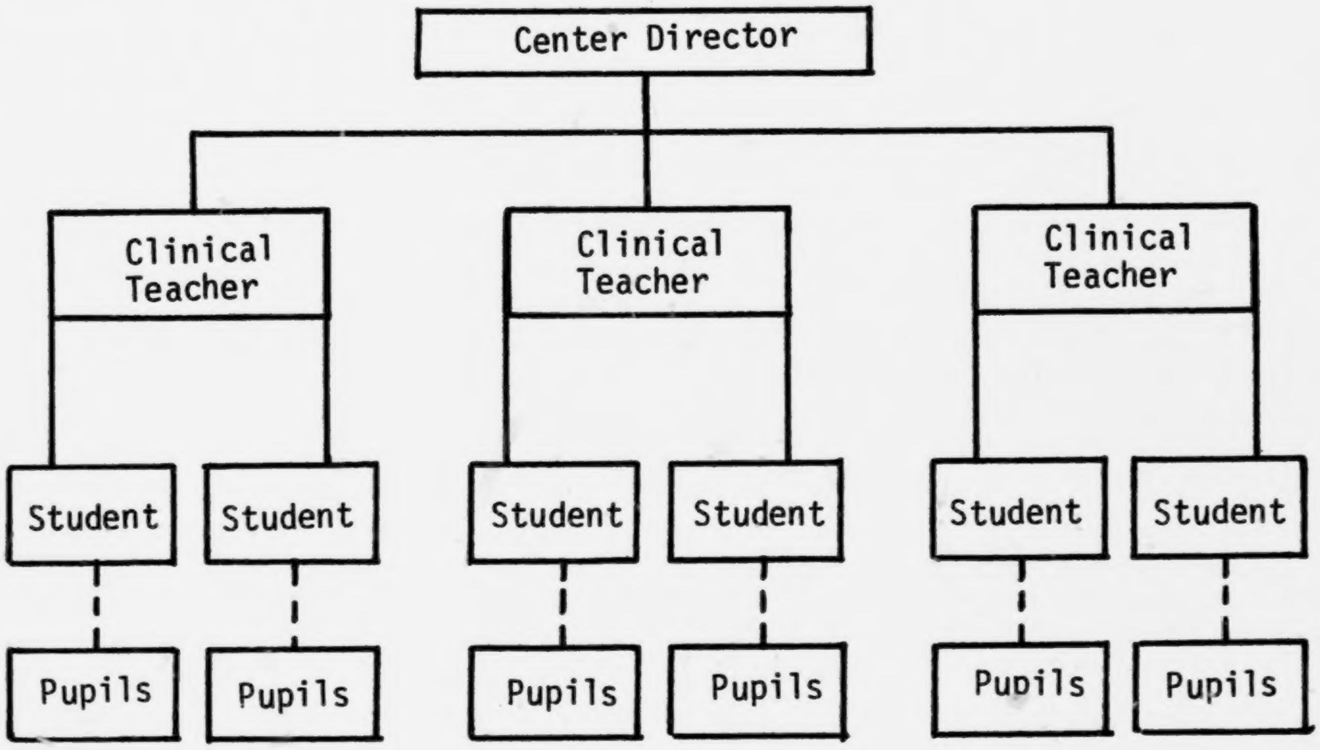
By scanning Figures 2.3, 2.4 and 2.5, it becomes apparent, therefore, that much of the work associated with the Teaching Theory and Practice Component as well as the second module (CD-2) of the Child Development Component, assumes a concurrent tutorial relationship between the student and a public school pupil. This tutorial relationship would represent

2

the first field contact and the first of the cooperative instructional activities of the university and the public school. (It is assumed that the aforementioned cooperative relationship would have already begun at the level of component and module design and development). Concurrent with or following completion of Module CM-9 in the Curriculum and Methods Component, students would be assigned to one of several public schools that would serve as tutorial and micro-teaching centers. The tutorial and micro-teaching centers would be staffed with a center director and a team of specially trained clinical teachers on the public school staff. The student would work with a clinical teacher who would in turn assign the student to one or more pupils to tutor. It would assume that the clinical teachers in the tutorial and micro-teaching centers would be teachers specially trained as subject-matter diagnosticians and remediators, and that they would be capable of guiding the students in their tutorial relationships with the pupils. These clinical teachers should be capable of making professional judgments as to the pupils who could profit from a tutorial relationship with a beginning professional student. Tutorial relationships between the student and the public school pupil would be of varying degrees of intensity and longevity depending upon the nature of the situation, but it would be expected that the student would experience an opportunity to tutor several children during the year. To increase the exploratory nature of the junior year, the children should represent different age levels and cultural and social backgrounds, and the tutoring should be done in several subject fields. Figure 2.9 shows the organizational structure for a tutorial and micro-teaching center that involves a center director who would coordinate and supervise the work of a group of clinical teachers who would in turn supervise the tutoring and micro-teaching of the students. It is pupils from the classrooms of these teachers who would be tutored by the students in the program.

The condition of protocooperation involving the adopting university or college, the public school, and the educational industry or regional laboratory is well illustrated at this point. For example, the public schools typically need teachers with more highly-developed skills as diagnosticians and remediators. This is particularly true as public schools move more in the direction of individually prescribed and self-directed instructions. The training of clinical teachers to serve as an essential part of the program staff during the junior pre-professional year would be an example of an inservice training program that would have considerable long run benefit to the public schools. Without such highly trained and sensitive clinical teachers working in conjunction with a university based staff, the concurrent field experience of tutoring could well miscarry and provide nonfunctional experiences for both the student and the pupil being tutored. Since there is often insufficient time during the school day to work individually with children who need special remedial assistance, the availability of a large number of students in the tutorial and micro-teaching center could be of considerable assistance to the public schools in working with pupils. The success of such tutoring experiences as well as the effectiveness of instructional modules of the junior pre-professional year, would depend

Organization of the Personnel of a
Typical Tutorial and Micro-teaching Center


Center Director
Clinical Teacher
Clinical Teacher
Clinical Teacher
Student
Student
Student
Student
Student
Student
Pupils
Pupils
Pupils
Pupils
Pupils
Pupils

_________________Indicates supervisory responsibility

------- Indicates tutorial or microteaching responsibility

Figure 2.9

very largely upon the development of educational materials. It is here that the educational industry or regional laboratories could play an extremely important role in collaborating with the college of education and the public schools. They could simulate the program so as to predict material development needs, develop instructional materials and pilot the use of these materials in the modules of the pre-professional year and the tutorial and micro-teaching centers.

The remainder of the pre-professional year would be designed to give the student basic skills in observation of children (the Child Development Component), basic skill and knowledge in the theory and practice of teaching (the Teaching Theory and Practice Component), additional awareness of self in relationship to others (the Professional Sensitivity Training Component), and beginning understandings of the social and cultural foundations of education (the Social and Cultural Foundations Component). In addition, the student would participate in the activities of the Self-Directed Component which would include participation in enabling seminars, participation in the writing of articles for and publishing of the program newsletter, as well as periodic meetings with his advisor. Near the completion of the pre-professional year, the student would present to his advisor a baseline goal paper which would outline his personal goals for professional growth during the senior year. These activities are discussed in detail in the chapter dealing with the Self-Directed Component.

The junior pre-professional year modules would terminate with a series of micro-teaching experiences in the public schools as described in Component CM-10. This module is designed to give the student experience in guiding the learning activities of small groups of students, and in analyzing his own teaching style. In this phase of the program, it would be the responsibility of the director of the tutorial and micro-teaching center to coordinate and supervise the micro-teaching activities, and the responsibility of the clinical teacher to provide pupils from his classes for students to use in micro-teaching episodes, and to work with the students in helping them to plan, teach, and evaluate micro-teaching lessons. Readers familiar with the concept of micro-teaching developed at Stanford University will note that the purposes for the micro-teaching in Module CM-10 are different from those of the Stanford micro-teaching clinic.(94) The teaching would be done in a scaled-down version of the classroom, but the goal of sequential technical skill development has been replaced by a goal of greater awareness of and sensitivity to one's own teaching behavior. This is a critical module in assisting the student in his decision to proceed into the senior professional year or terminate professional training.

In summary, then, the pre-professional junior year is designed to: (a) provide the student with an exploratory series of experiences in each of the professional components that would begin the building of a repertoire of knowledge, skill, and feeling states necessary for extensive professional study and practice during the senior professional year, (b) provide an opportunity to experience the field of education at both a theoretical level and a practical level of engagement with elementary school pupils through tutoring and micro-teaching and (c) to provide the student an opportunity (on the basis of these experiences) to make a more rational decision about whether to enter the senior professional program or terminate professional work and pursue a degree of some different nature.

To assist the student in making this final decision about entering the senior professional year, two different types of experiences have been provided in the junior year. The first of these is the work in the Self-Directed Component that includes the activities of the enabling seminar as well as an on-going contact with the student's advisor. The second mechanism is that of optional modules that provide an opportunity for independent study in any of the professional components where the student feels that additional knowledge or experience would be necessary for him to make a more rational decision about entering the senior professional program. Since these modules are really independent study projects, defined by the student with the assistance of personnel from the Self-Directed Component, specific objectives and activities cannot be pre-defined. These optional modules are not described in the component chapters that follow. It is assumed, however, that provisions would be made by the staff of the various components to arrange for and supervise this independent study activity.

The rationale, objectives, and instructional activities associated with each module of the program components of the junior pre-professional year are described in detail in the chapters that follow.

The Senior Professional Year

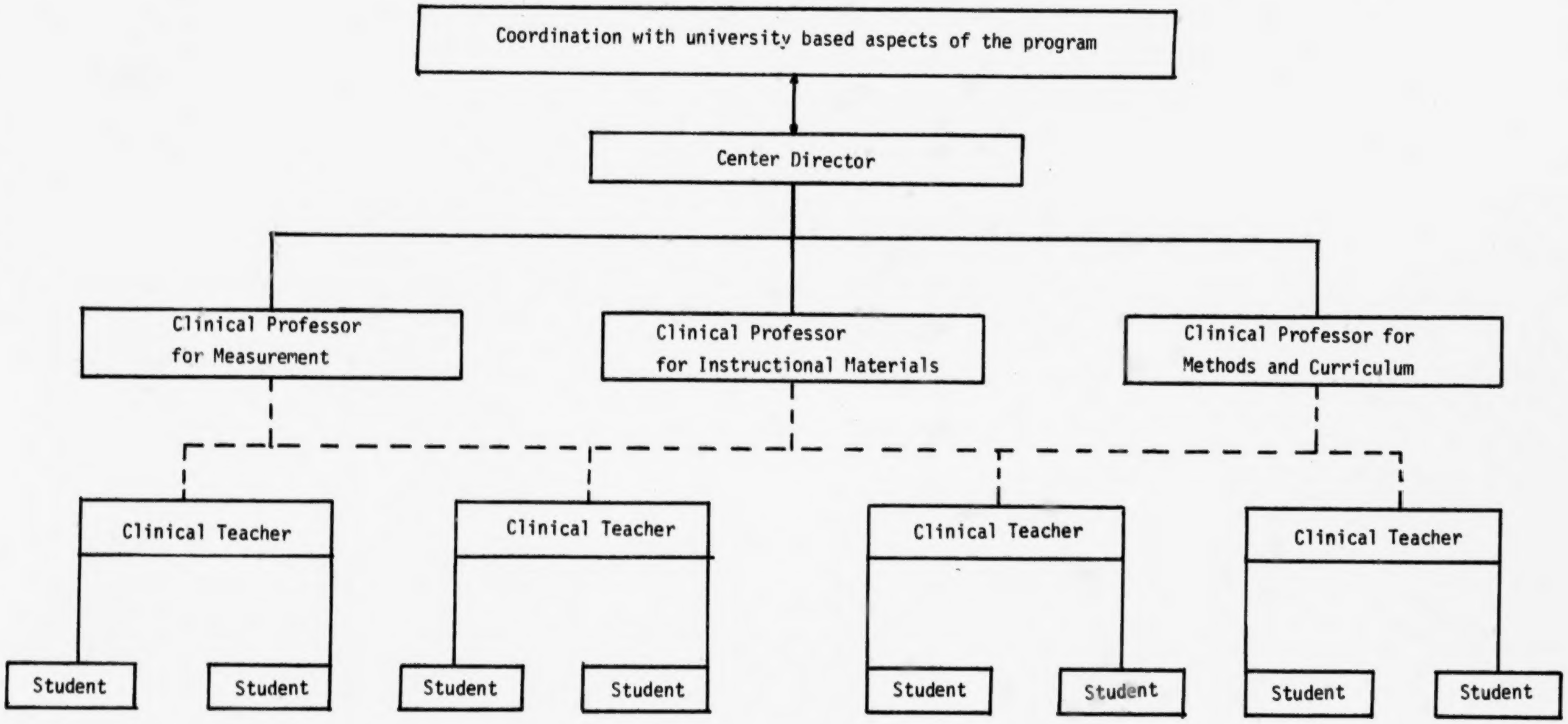
Successful completion of the junior pre-professional year would enable the student to engage in full time professional study during the senior professional year. The experiences of the senior professional year could be started upon completion of the junior professional modules whether the student had achieved senior status in the college or not. A student would not have to wait until his "senior year" in college to be eligible to start modules in this aspect of the program. The terms are common coin in the academic world, and are used to illustrate how the model could be easily adaptable to the conventional structure of the typical college or university. The component and modules of the senior professional year are designed to build on the skills, knowledge, and feeling states developed during the junior year and to take the student to the point of being a competent beginning elementary teacher generalist. The specifics of the training modules, i.e., objectives and instructional activities, are described in detail in the descriptions of the components in Chapters 4 through 9 of this report. Generally, however, it would be the purpose of the senior professional year program to immerse the student in full time professional study at a theory, knowledge, and skill-building level accomplished by pursuit of modules within the Child Development Component, the Social and Cultural Foundations Component, the Teaching Theory and Practice Component, and the Professional

Sensitivity Component. Developing and applying skills and knowledge in the context of an actual public school setting would be the principal responsibility of the Elementary Methods and Curriculum Component. Modules CM-11 through CM-16 would take place in one of several Teaching Centers associated with the training program. While pursuing theoretical work dealing with the areas of child development, teaching theory and practice, professional sensitivity training, and the social and cultural foundations, students would be assigned in pairs for a portion of each day to a Teaching Center where they would engage in a variety of exploratory teaching activities described in detail in the Elementary Methods and Curriculum Component in Modules CM-11 through CM-16. The field experiences associated with these modules are a critical part of the senior professional year, and are again an example of protocooperation involving, in this case, the university and the public schools. An examination of the personnel requirements for modules CM-11 through CM-16 shows that the instructional responsibilities for these modules would be carried out by clinical professors and clinical teachers in Teaching Centers. The Teaching Center, for example, might be staffed by a director who would supervise and coordinate the activities of the clinical professors and clinical teachers, three clinical professors, one for curriculum and methods, one for measurement, and one for instructional materials, and a cadre of clinical teachers whose classrooms and pupils would be used as the basis for the laboratory field experience associated with the Curriculum and Methods Component modules CM-11 through CM-16. An organizational chart for a typical teaching center is shown in Figure 2.10. These modules call for a continual cycling of increasingly complex teaching acts throughout the senior professional year. The professional staff of the Teaching Centers including the director of the center, the three clinical professors, and the clinical teachers,would bring to bear their particular expertise in working with students in modules CM-11 through CM-16.

For example, this could mean that when a pair of students was engaged in planning and teaching lessons and units of work in the teaching center where the focus of activity was on the selection and creation of teacher made measurement instruments (CM-14), the clinical professor for measurement and the student's clinical teacher would be responsible for instruction in that area. Where the selection of teaching materials was of prime consideration (CM-12), the clinical professor for instructional materials and the student's clinical teacher would be responsible for that area of the training program. Where unit planning dealing with issues of curriculum and methods were of prime concern (CM-15), the clinical professor of curriculum and methods and the student's clinical teacher would have responsibility for these aspects of instruction. Where problem resolution required the simultaneous application of skills and knowledge in the areas of measurement, instructional material, and curriculum methods, the clinical professors and clinical teacher would work as a team with the students on that aspect of the training program. The clinical professors, clinical teachers and students would constitute a flexible, rotating set of teams to provide both supervision and instruction for the students in this

Organization of the Personnel of a Typical Teaching Center

Figure 2.10


Coordination with university based aspects of the program
Center Director
Clinical Professor for Measurement
Clinical Professor for Instructional Materials
Clinical Professor for Methods and Curriculum
Clinical Teacher
Clinical Teacher
Clinical Teacher
Clinical Teacher
Student
Student
Student
Student
Student
Student
Student
Student

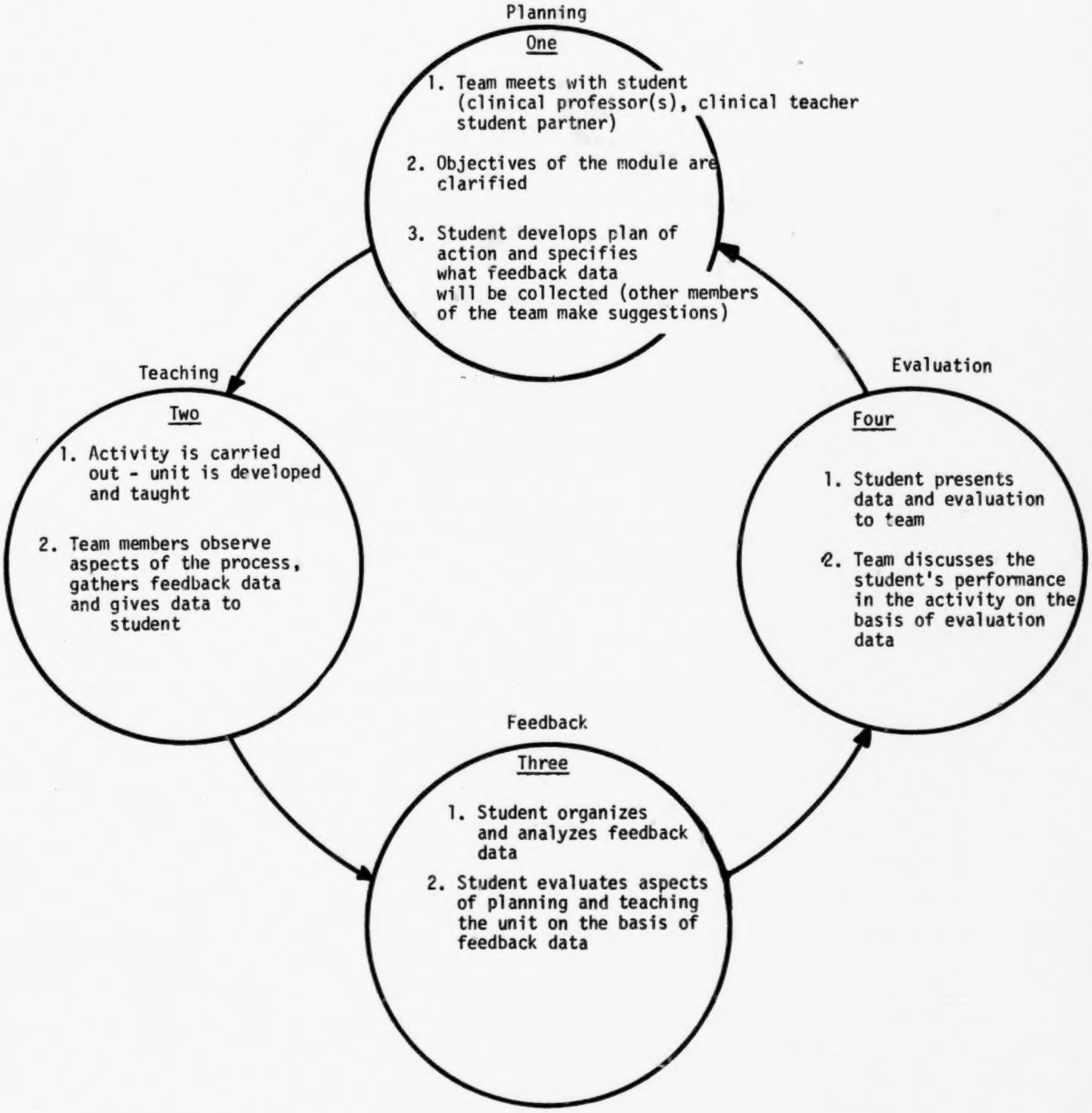
important field experience aspect of the program. An example of the participation of a team-planning, teaching and team-evaluation cycle is shown in Figure 2.11. The planning, teaching feedback and evaluation cycle is an illustration drawn from module CM-15, unit planning. Each of the modules CM-11 through CM-16 would be done at least three times in different Teaching Centers. In some cases the student may be required to repeat the module one or more times until he demonstrates his proficiency with this aspect of teaching. A Teaching Center would contain a number of teams. One criterion for the number of pairs of students assigned in pairs to a Teaching Center would be the criterion of instructional efficiency. This would be particularly critical with respect to scheduling seminars. There would have to be a sufficient number of students in a center, working on a particular module at approximately the same time, to make efficient use of the seminar as a remedial and initial instructional technique.

Here the principle of protocooperation would take on new dimensions as clinical teachers and clinical professors underwent intensive training to prepare them for their critical role in the training program. One aspect of this inservice training would involve having the clinical professors and clinical teachers go through each of the senior year modules in much the same way that students would be expected to go through them. Such inservice training would have a continuing advantage for the public school system. The development of educational materials both for the components operating at the university or college as well as the instructional materials to be used in the Teaching Centers would provide the educational industries or regional laboratories with an excellent opportunity to develop and test new materials under the real conditions of a training program and a live public school setting. In addition, the program would provide an excellent context in which computer programs could be developed and tested for scheduling and coordinating. One of the direct advantages to the university in such a cooperative venture would be the extensive use of public school facilities for the education of students as well as the availability of highly trained and competent clinical professors and clinical teachers who could assume much of the responsibility for instruction in the elementary curriculum and methods modules during the senior professional year. The assumption here is, of course, that these clinical professors would have not only the theoretical knowledge necessary to transcend direct experience, but in addition would have the sensitivity to help the students learn to function in the real world of the elementary school. As clinical professors, they would be living and working within that environment with students on a continuing basis. Clinical teachers, to whom pairs of students would be assigned, would be regular classroom teachers who expressed an interest in cooperating in teacher education, and who had been specially trained to function in a supportive supervisory relationship.

The program would also call for several Teaching Centers representing a diversity of age levels from nursery school through the intermediate grades and differing social and economic backgrounds of children. During

Planning, Teaching, Feedback, Evaluation Cycle

Figure 2.11



1. Team meets with student (clinical professor(s), clinical teacher student partner)
2. Objectives of the module are clarified
3. Student develops plan of action and specifies what feedback data will be collected (other members of the team make suggestions)

1. Activity is carried out - unit is developed and taught
2. Team members observe aspects of the process, gathers feedback data and gives data to student

1. Student organizes and analyzes feedback data
2. Student evaluates aspects of planning and teaching the unit on the basis of feedback data

1. Student presents data and evaluation to team
2. Team discusses the student's performance in the activity on the basis of evaluation data

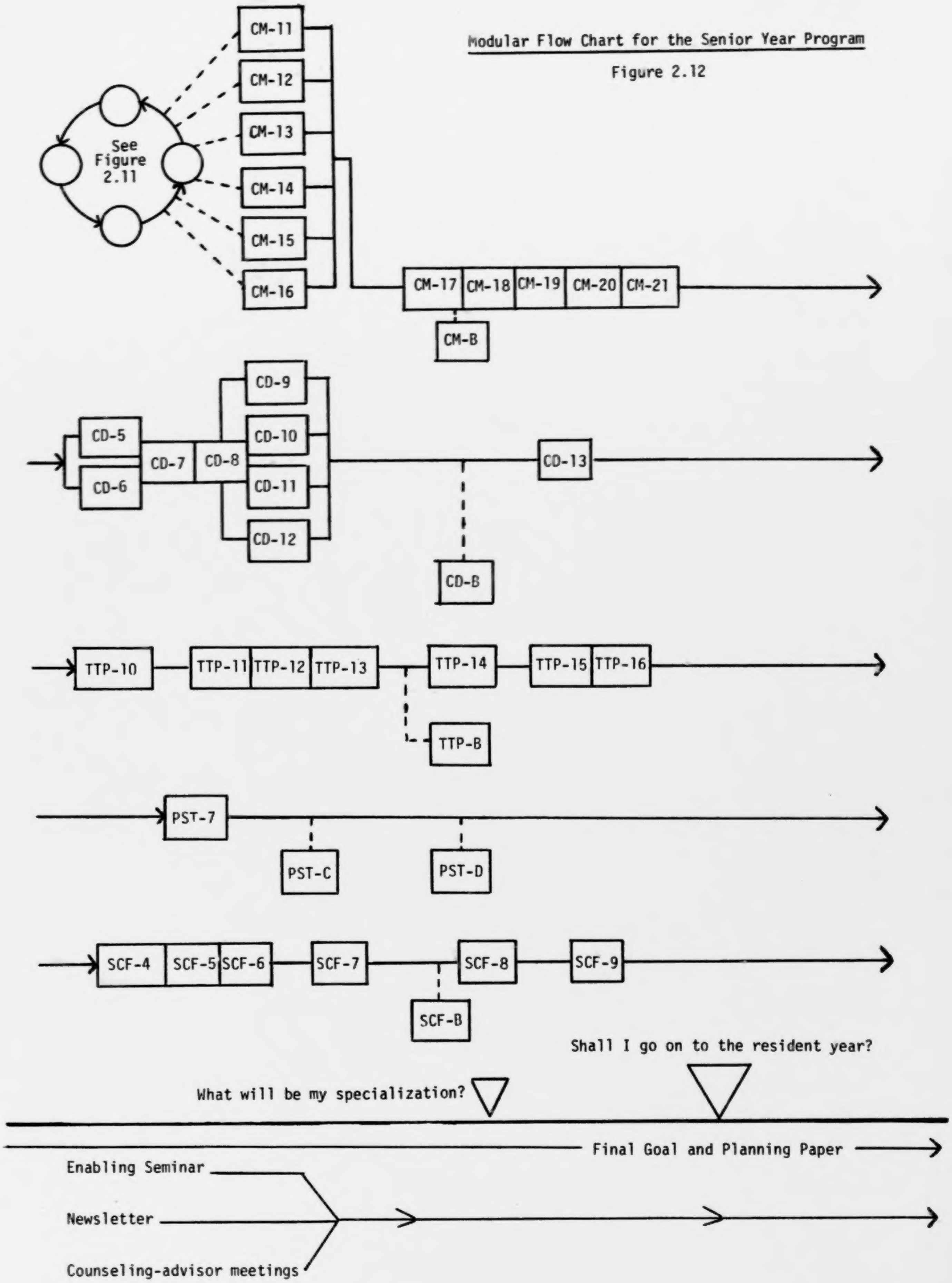
the course of the senior professional year, the student would have an opportunity to cycle through each of the exploratory teaching episodes associated with modules CM-11 through CM-16 in such a way as to have direct experience in teaching each of the five basic subject areas (language arts, reading, social studies, science, and mathematics) and in teaching children of varying age levels and varying social and economic backgrounds. Work in the Teaching Centers during the senior year is designed to provide exploratory teaching experiences associated with modules of the Elementary Methods and Curriculum Component. In addition, however, it would provide a concurrent field experience that can be drawn upon by the Social and Cultural Foundations Component, the Professional Sensitivity Training Component, the Teaching Theory and Practice Component, and the Child Development Component. In addition, the curriculum development modules of the Elementary Curriculum and Methods Component (modules CM-17 through CM-21) call for a concurrent teaching experience. Figure 2.12 represents an overview of the professional components and instructional modules of the senior professional year. Figures 2.13 through 2.18 show the modular structure of each of the components in greater detail. Inspection of Figures 2.13, 2.14 and 2.15 will show that many modules of the Methods and Curriculum, the Child Development, and Teaching Theory and Practice Components, call for a concurrent teaching experience. Further inspection of these figures will show inter and intra component prequisite and concurrent interlock specifications.

Concurrent with the half day exploratory teaching experiences of the senior year, the student would pursue work in various other components of the program. The content, objectives, and instructional activities of these components is described in detail in the chapters that follow. In general, however, the objectives of these components deal with the development of theory, skill, knowledge and feeling states that have both direct application to the concurrent exploratory teaching experience as well as learnings designed to challenge and prod the student into thinking about and developing the resources for becoming a change agent both at the moment and in his future professional life.

One of the pervasive characteristics of this model program is the objective of creating elementary school teachers who by experience have learned to be self-directed learners. The assumption is that by having intensively experienced such an approach to education in their own training they will become teachers who will feel more comfortable, and have developed the repertoire of skills and knowledge necessary to assist their pupils toward becoming more self-directed learners. The function of the Self-Directed Component, therefore, continues to play an important role in this process throughout the senior professional year. In addition it is the responsibility of the Self-Directed Component, and particularly the counseling and advisory staff of that component, to assist the student in the process of identifying and exploring a specialization that he would like to pursue during the resident graduate year. Rather than have the student make this decision about a specialization on the basis of such factors as vocational saleability or the professional

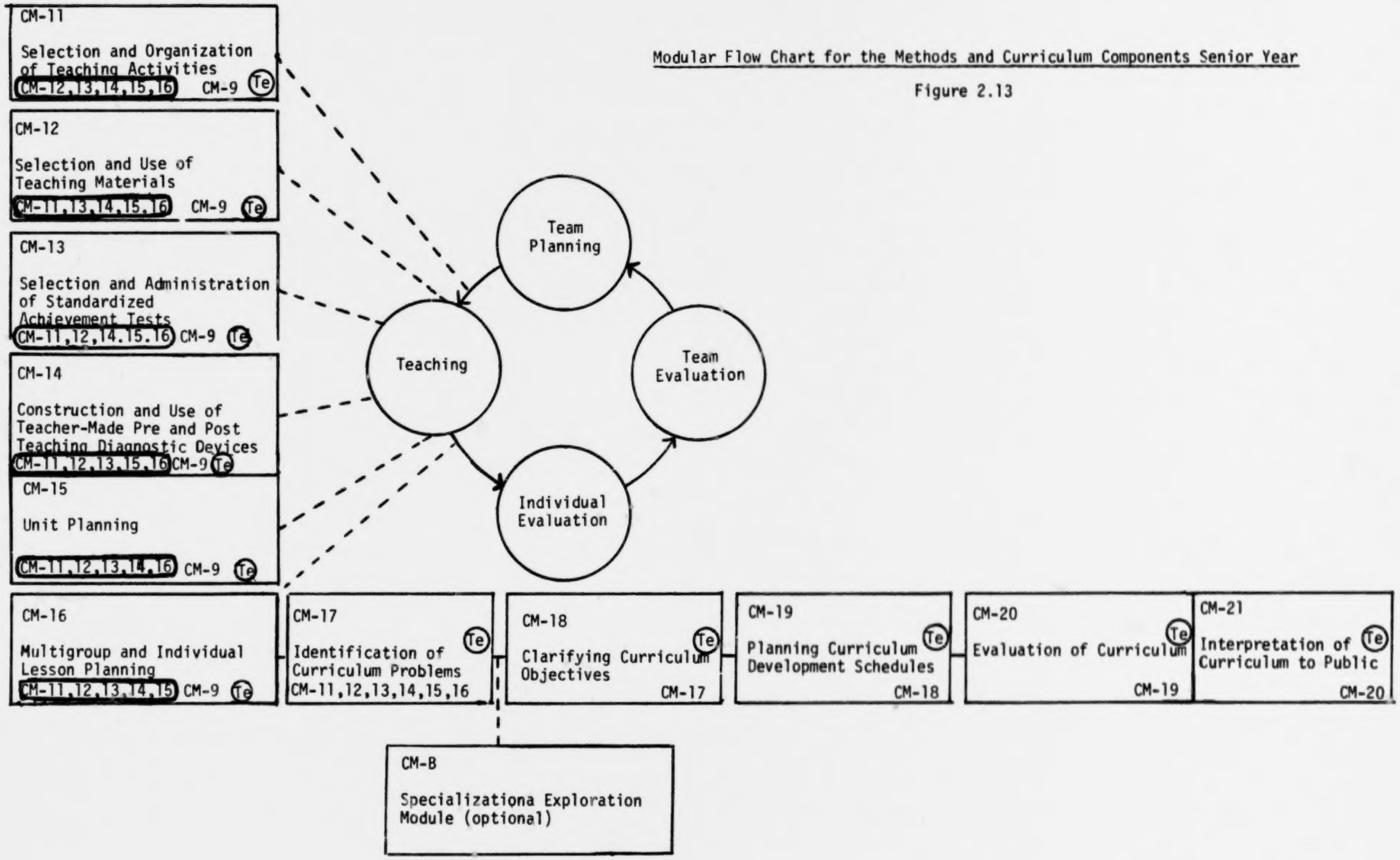
Modular Flow Chart for the Senior Year Program

Figure 2.12


See Figure 2.11
CM-11
CM-12
CM-13
CM-14
CM-15
CM-16
CM-17
CM-18
CM-19
CM-20
CM-21
CM-B
CD-5
CD-6
CD-7
CD-8
CD-9
CD-10
CD-11
CD-12
CD-13
CD-B
TTP-10
TTP-11
TTP-12
TTP-13
TTP-14
TTP-15
TTP-16
TTP-B
PST-7
PST-C
PST-D
SCF-4
SCF-5
SCF-6
SCF-7
SCF-8
SCF-9
SCF-B
Shall I go on to the resident year?
What will be my specialization?
Final Goal and Planning Paper
Enabling Seminar
Newsletter
Counseling-advisor meetings

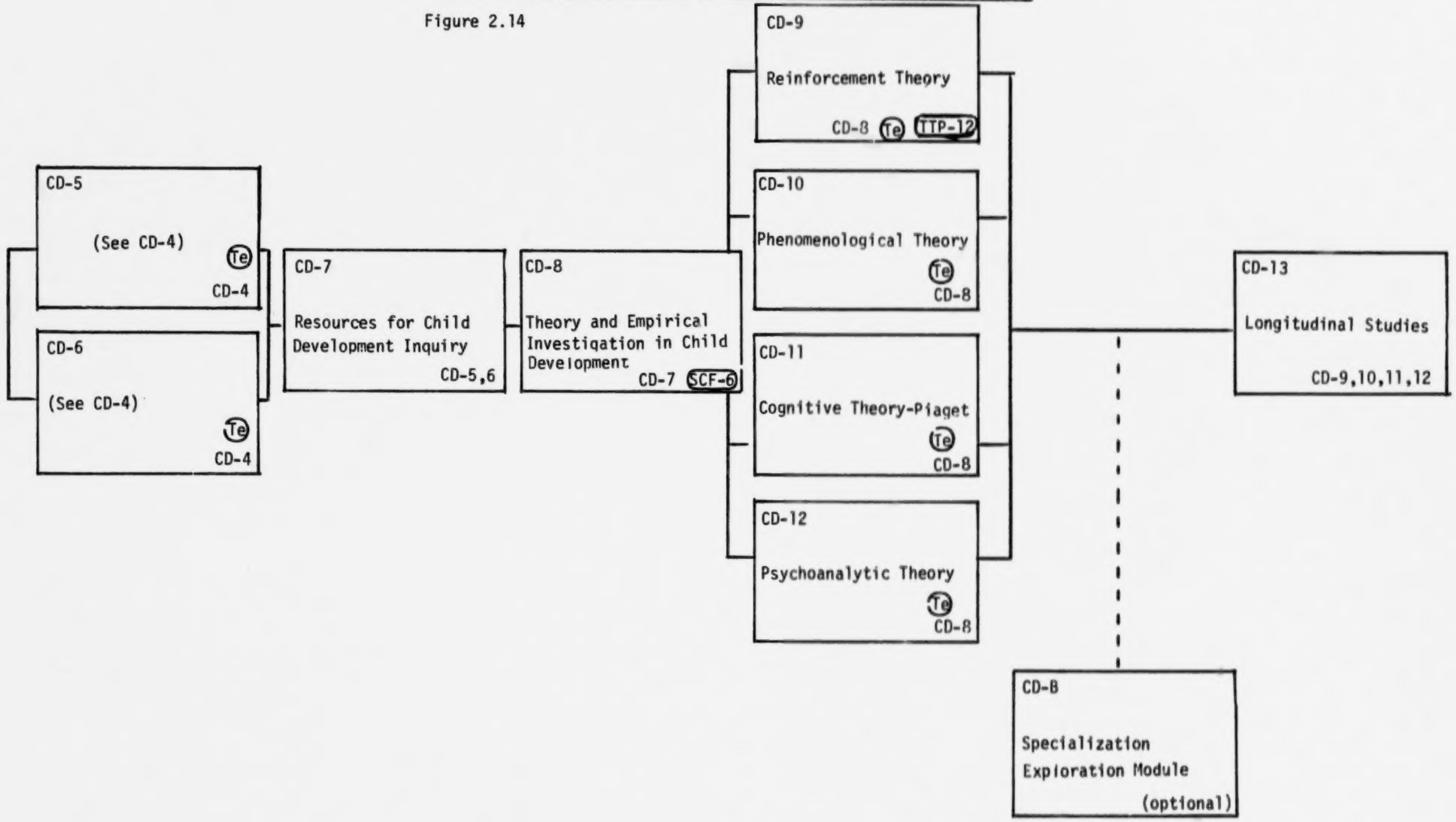
Modular Flow Chart for the Methods and Curriculum Components Senior Year

Figure 2.13


CM-11
Selection and Organization of Teaching Activities
CM-12,13,14,15,16 CM-9 Te
CM-12
Selection and Use of Teaching Materials
CM-11,13,14,15,16 CM-9 Te
CM-13
Selection and Administration of Standardized Achievement Tests
CM-11,12,14.15.16 CM-9 Te
CM-14
Construction and Use of Teacher-Made Pre and Post Teaching Diagnostic Devices
CM-11,12,13,15,16 CM-9 Te
CM-15
Unit Planning
CM-11,12,13,14,16 CM-9 Te
CM-16
Multigroup and Individual Lesson Planning
CM-11,12,13,14,15 CM-9 Te
Teaching
Team Planning
Team Evaluation
Individual Evaluation
CM-17
Identification of Curriculum Problems
CM-11,12,13,14,15,16
Te
CM-18
Clarifying Curriculum Objectives
CM-17
Te
CM-19
Planning Curriculum Development Schedules
CM-18
Te
CM-20
Evaluation of Curriculum
CM-19
Te
CM-21
Interpretation of Curriculum to Public
CM-20
Te
CM-B
Specializationa Exploration Module (optional)

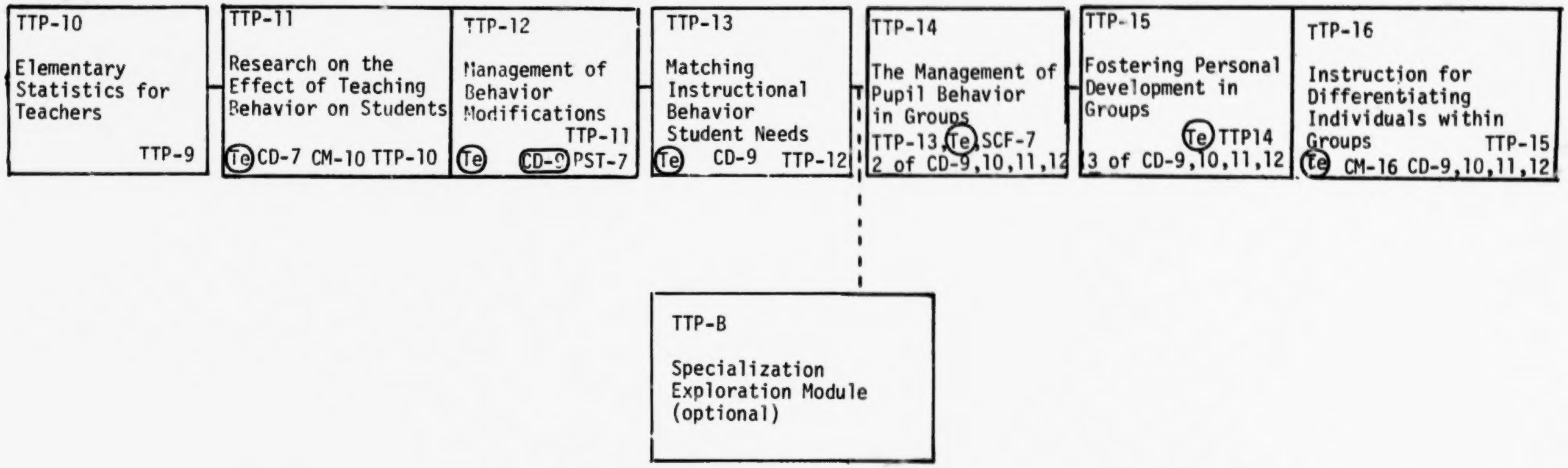
Modular Flow Chart for the Child Development Component Senior Year

Figure 2.14


CD-5
(See CD-4)
Te
CD-4
CD-6
(See CD-4)
Te
CD-4
CD-7
Resources for Child Development Inquiry
CD-5,6
CD-8
Theory and Empirical Investigation in Child Development
CD-7
SCF-6
CD-9
Reinforcement Theory
CD-8
Te
TTP-12
CD-10
Phenomenological Theory
Te
CD-8
CD-11
Cognitive Theory-Piaget
Te
CD-8
CD-12
Psychoanalytic Theory
Te
CD-8
CD-13
Longitudinal Studies
CD-9,10,11,12
CD-B
Specialization Exploration Module
(optional)

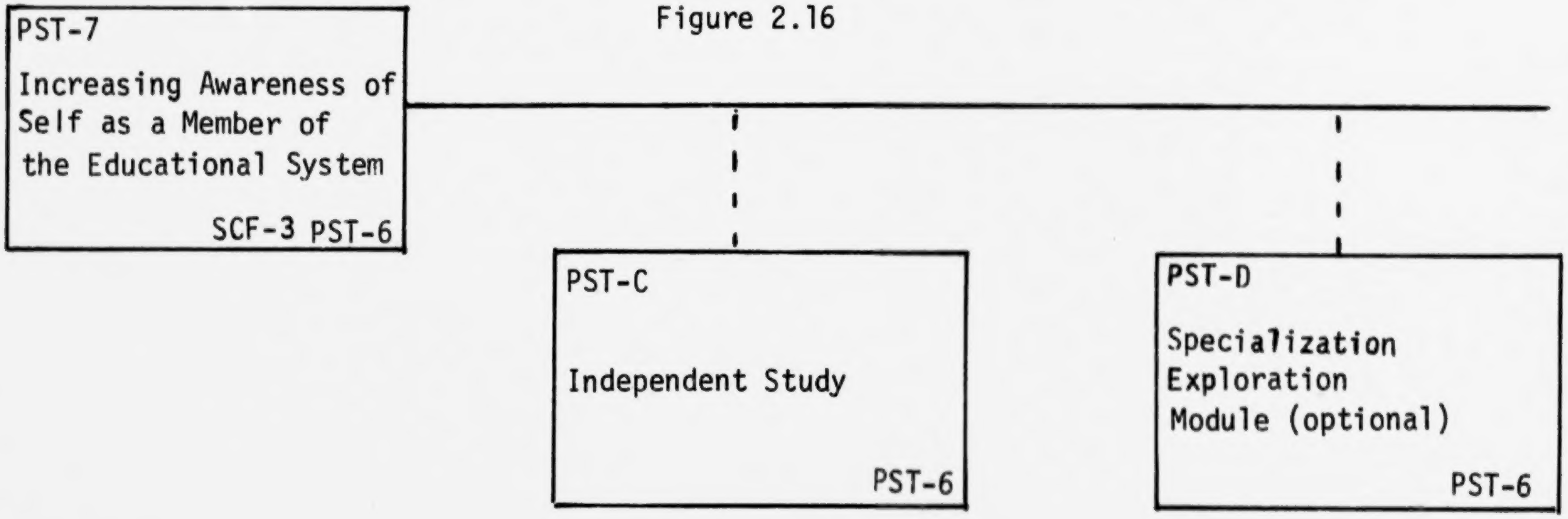
Modular Flow Chart for the Teaching Theory and Practice Component Senior Year

Figure 2.15


TTP-10
Elementary Statistics for Teachers
TTP-9
TTP-11
Research on the Effect of Teaching Behavior on Students
Te CD-7 CM-10 TTP-10
TTP-12
Management of Behavior Modifications
TTP-11
Te CD-9 PST-7
TTP-13
Matching Instructional Behavior Student Needs
Te CD-9 TTP-12
TTP-14
The Management of Pupil Behavior in Groups
TTP-13, Te, SCF-7
2 of CD-9,10,11,12
TTP-15
Fostering Personal Development in Groups
Te TTP14
3 of CD-9,10,11,12
TTP-16
Instruction for Differentiating Individuals within Groups
TTP-15
Te CM-16 CD-9,10,11,12
TTP-B
Specialization Exploration Module (optional)

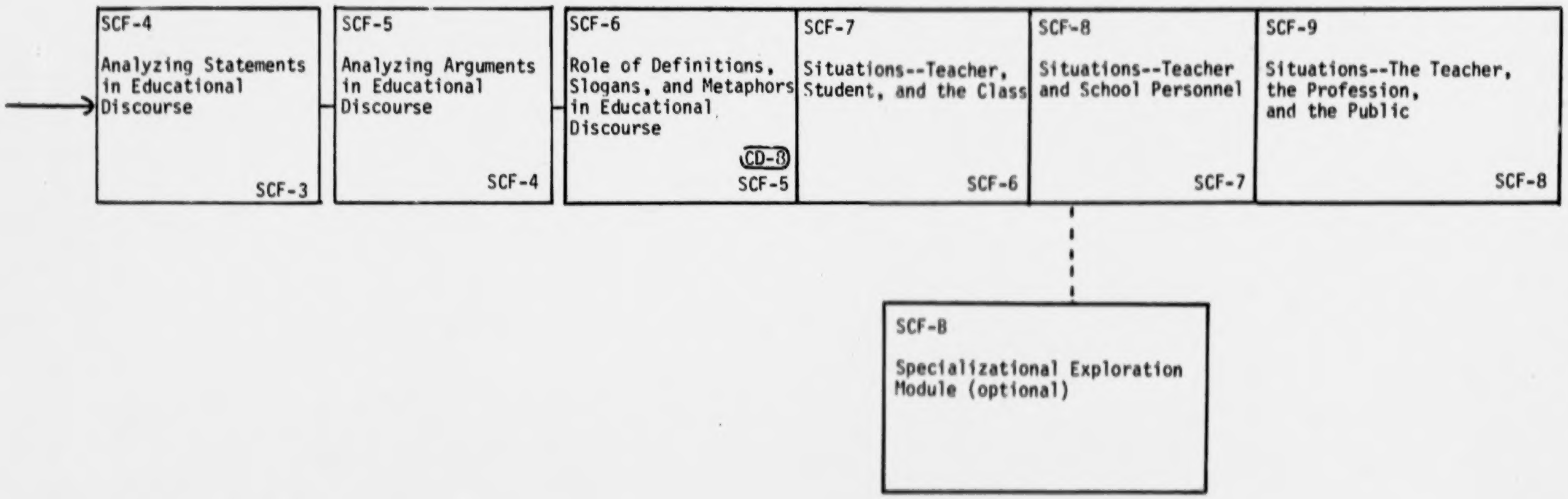
Modular Flow Chart for the Professional Sensitive Training Component Senior Year

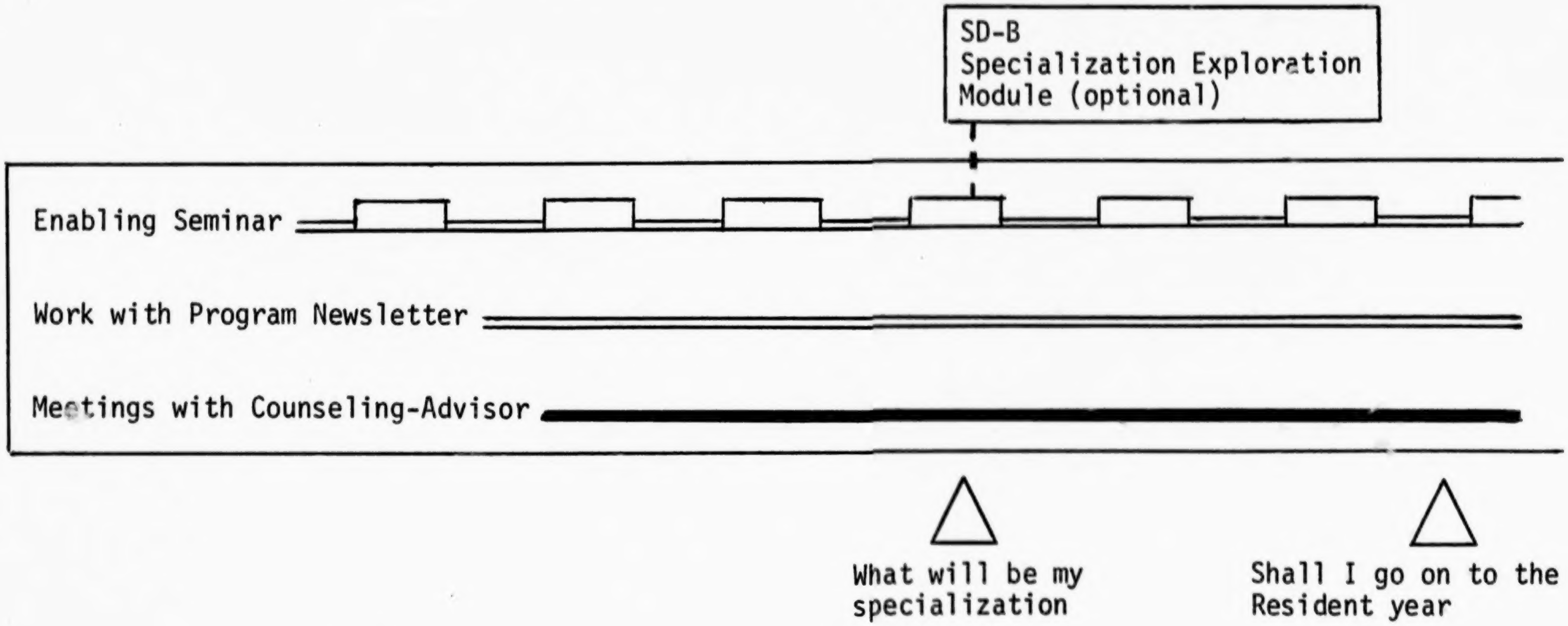
Figure 2.16


PST-7
Increasing Awareness of Self as a Member of the Educational System
SCF-3 PST-6
PST-C
Independent Study
PST-6
PST-D
Specialization Exploration Module (optional)
PST-6

Modular Flow Chart for the Social and Cultural Foundations Component Senior Year

Figure 2.17


SCF-4
Analyzing Statements in Educational Discourse
SCF-3
SCF-5
Analyzing Arguments in Educational Discourse
SCF-4
SCF-6
Role of Definitions, Slogans, and Metaphors in Educational Discourse
CD-8
SCF-5
SCF-7
Situations--Teacher, Student, and the Class
SCF-6
SCF-8
Situations--Teacher and School Personnel
SCF-7
SCF-9
Situations--The Teacher, the Profession, and the Public
SCF-8
SCF-8
Specializational Exploration Module (optional)


SD-B
Specialization Exploration
Module (optional)
Enabling Seminar
Work with Program Newsletter
Meetings with Counseling-Advisor
What will be my
specialization
Shall I go on to the
Resident year

Flow Chart for Self Directed Component Senior Year

Figure 2.18

prestige of the specialization, it would be the function of the Self-Directed Component, through the enabling seminar and conversations with an advisor, to: (a) engage the student in an extensive analysis of the many problems facing American education, (b) use his interest in one of those problems as one of his major criteria for selection of a specialization, and (c) provide him with an appropriate exploratory experience or set of experiences during the senior professional year that would allow him to test his capacity for developing such a specialization, and to further test his interest in that specialized area. In order to assist in this process, each of the professional program components has an optional specialization exploration module which is designed to serve as an independent study project for the purpose of exploring possible specialization. These are independent study projects for which objectives and activities have not been specified in the component descriptions found in later chapters. This module could be repeated by a student several times as he explored various dimensions of a specialization related to that program component. As an example, if a student identified among the many problems facing American education, the inadequacy of reading materials and literature for culturally disadvantaged primary age children, and became very much interested in that field as an area of special pursuit, the student could take advantage of an independent study project involving a survey of children's literature (the Elementary Curriculum and Methods Component), an analysis of the relationship of developmental stages to children's interests in literature (Child Development Component) and may arrange through the Facilitation Center of the Self-Directed Component to visit publishing houses of children's literature or other appropriate agencies for the purpose of becoming well enough acquainted with the field of children's literature to design a specialization program that he would start during the summer preceding his resident year of teaching.

Another function of the Self-Directed Component would be to provide counseling and advisory services to the student to help him formulate a final goal and planning paper. This paper is described in detail in the chapter dealing with the Self-Directed Component. In general, however, the purpose of the paper would be to assist the student in establishing for himself a set of goals that he would hope to accomplish in his work in the Resident Center during the fifth year of the program. More specifically, the final goal and planning paper would be a refinement of the earlier baseline goal paper of the junior pre-professional year and would address specifically what the student would like to accomplish with his pupils during the resident year. In addition, the final goal and planning paper could deal with such subjects as the personal growth of the student with respect to his specialization or other professionally-related subjects.

In summary then, the senior professional year of this program has two primary purposes. The first of these is to complete the basic training necessary for a student to certify as a competent beginning generalist in the field of elementary education--a person who could function in a teaching situation from nursery school through grade six.

Secondly, it would be the purpose of the senior professional year to give the student an intensive and varied experience in teaching in the nursery schools and elementary school. On the basis of these experiences it is assumed that he would make more rational decisions as to whether he should pursue a specialization in the field of nursery school or elementary school education and engage in further study and teaching during the resident year. For those students who felt that it would be expeditious for them to do so, they could graduate from the university at the end of the senior professional year with a B.S. degree and obtain provisional certification in most states.

The Resident Year

The resident year, or fifth year, is defined as including not only the public school year from September through June but the summer specialization program preceding and following that year of residence in a center.

The summer specialization work, because of its highly individualized nature, would take on a variety of forms. These would include such things as formal course work at universities, work experience in industry and social agencies, and could include extensive travel and study both within the United States and abroad. The only criteria for the selection of a specialty are: (a) that it represents a response to a significant problem area in American education, (b) that the student has the interest and capacity to pursue such a specialization, (c) that a program of study leading to such a specialization can be worked out for the student by the staff of the Facilitation Center of the Self-Directed Component, and (d) that the specialization be in some way applicable to special curriculum building projects at the Resident Center. To describe a particular specialization would be to deal at a highly individualized level of illustration, and this is done in detail in the scenario in Chapter 10.

Just as the model program would call for a diversity of types of Teaching Centers during the senior professional year, the program would call for a diversity of Resident Centers during the fifth year of the program. Unlike the transient contact of students with a variety of Teaching Centers during the senior professional year, it would be assumed that the student would be assigned to a Resident Center of his choice for an entire school year. At that Resident Center, the student would engage in responsible partnership teaching with another resident. (Two residents would share responsibility for one instructional station or classroom in which each would be paid half a salary). This partnership teaching would be supervised by the director of the Resident Center and a team of clinical professors who would be experts in the field of instructional materials, instruction, curriculum, and measurement. The Resident Center director and staff of clinical professors would supervise the teaching of the resident students and would also conduct a special problem seminar growing out of the teaching problems experienced by the student residents. No formal course work in the areas of elementary curriculum and methods, child development, teaching theory and practice, or professional sensitivity training would be scheduled during the resident year. It is assumed, however, that the seminars conducted by the director of the Resident Center and his staff of clinical professors would deal with content drawn from these components as they relate to specific teaching problems that the resident students are encountering in the Resident Centers.

The rationale for continuing formal course work in the form of instructional modules for the Social and Cultural Foundations Component during the resident year is found in the rationale section of that component in Chapter 8. Basically, the rationale states that there are appropriate emotional and developmental reasons for postponing certain aspects of work in the area of social and cultural foundations until the student has gotten over the initial acute awkward preoccupation with self and the discomfort associated with learning to manage a classroom and teach effectively. The modules of the Social and Cultural Foundations Component during the resident year would deal with certain dimensions of the logic of the language of teaching (SCF-10 through SCF-14) and with a series of illustrative social issues confronted by American education (SCF-15 through SCF-21). It would be assumed that these issues would be discussed in the context of the Resident Center in which the student resident was assigned, but would not be restricted to a study of the social and cultural dynamics of the Resident Center. This work in the social and cultural foundations would be directed by personnel from the university, but the seminars would utilize personnel from the public school and community where appropriate.

Residents would also pursue a program of independent study associated with their chosen specialization, and would have opportunities to apply their specialization as they engaged in a series of special curriculum development projects at the Resident Center. These projects would center on specific curriculum, instructional or measurement and evaluation problems of the school system in which the Resident Center was housed. The team would include resident students, teachers in the school system who would include resident students, teachers in the school system who would be a part of the Resident Center, and the clinical professors of instruction, instructional materials, curriculum, and measurement, as well as personnel from the educational industry and regional laboratories. The products of these special project teams would be designed to have direct application to the instructional program for elementary school children at the Resident Center. The product of these projects, in addition, would have indirect application to the training program during the junior and senior years, particularly with respect to the continued revision of the Elementary Methods and Curriculum Component. Indeed the output of these special projects would have the potential of continually revitalizing and revising the content of the modules of the Elementary Methods and Curriculum Component and would have a similar, but perhaps less direct, impact on revision of the other program components.

The flexibility of the partnership teaching arrangement in the Resident Centers would: (a) allow for a variety of experimental teaching patterns, e.g., while one resident handled the class for a full week his partner could travel and study in conjunction with his specialization, (b) the experimental utilization of resident teachers and regular public school teachers within the Resident Centers, e.g., team teaching, and (c) the involvement of the public school personnel, both teachers and clinical professors in a variety of inservice training projects of benefit to the student residents and to the personnel of the school system in which the Resident Centers are housed. For example, resident teachers could release experienced teachers for work on special projects and vice-versa.

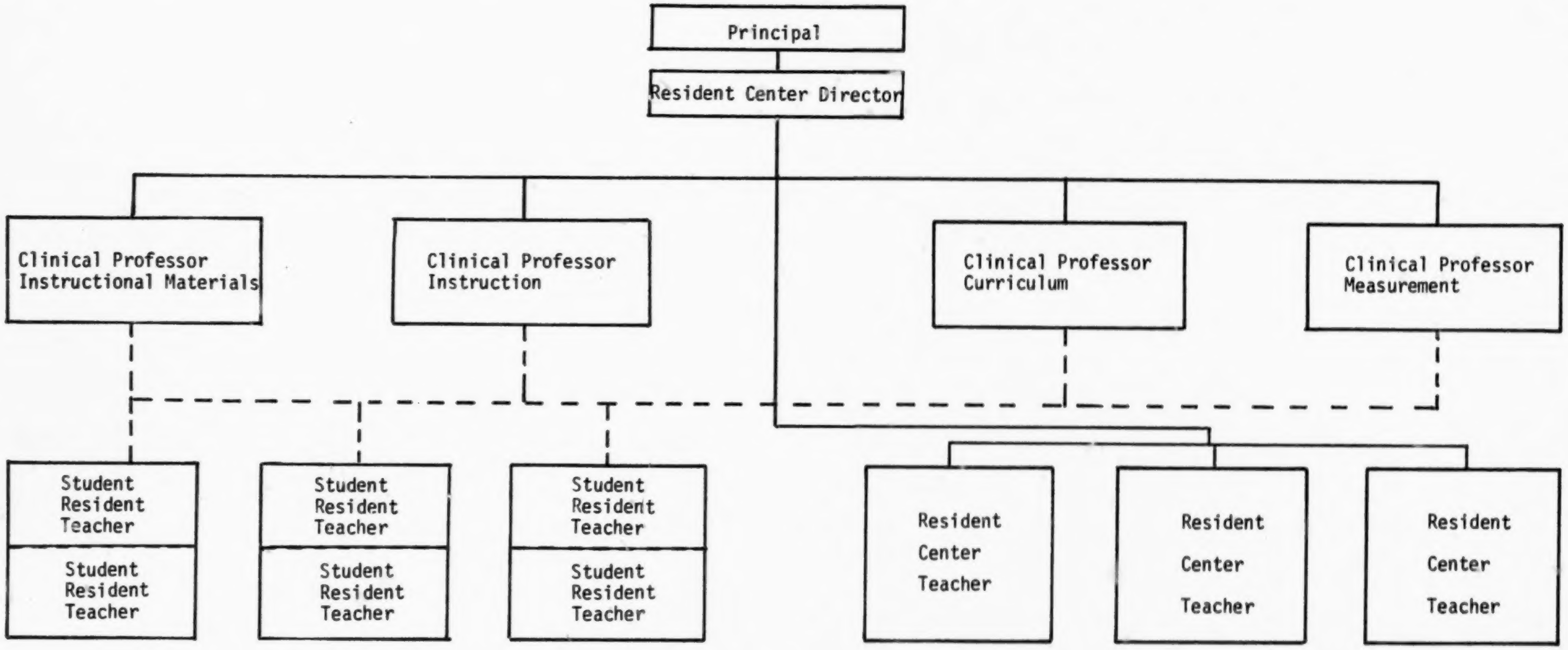
Resident Centers like the senior year teaching centers would be specially selected to represent a variety of types of teaching institutions. For example, one Resident Center could be a private nursery school or headstart center for students wishing to specialize in nursery school teaching. Another Resident Center could be an elementary school in a culturally-disadvantaged section of a large urban center. Other Resident Centers could involve schools situated in suburban or remote rural communities. Resident Centers could be selected from school systems that were engaged in innovative instructional practices such as computer-based or individually prescribed instruction. In any case, resident centers should be specially chosen and staffed with personnel from the school district, clinical professors and teachers who would encourage a self-directed and experimental attitude on the part of the resident students, and who would have a keen interest in and dedication to teacher education.

Though the number of students assigned to a resident center would vary from one situation to another, one might consider, for example, assigning twenty residents to a center, thus covering ten classrooms or teaching stations. These twenty residents would be assimilated into the school system and placed in such a way that they would be in contact with older, more experienced teachers who would work with them on the special project teams, but these teachers would not have direct supervisory responsibility for the resident students. In this way the resident students and the older, more experienced teachers of that school system would interact on a daily basis as peers and colleagues both in their teaching responsibilities as well as in their work on special projects. Figure 2.19 shows an organizational chart for a typical resident center.

During the resident year, personnel from the Self-Directed Component (the counseling staff) would have continued contact with the resident students to assist them in their independent study associated with their area of specialization and by making the resources of the Facilitation Center available at Resident Centers.

Upon completion of the resident school year, the student would complete his specialization during the following summer. It is assumed

Organization of the Personnel
of a Typical Resident Center School


Principal
Resident Center Director
Clinical Professor Instructional Materials
Clinical Professor Instruction
Clinical Professor Curriculum
Clinical Professor Measurement
Student Resident Teacher
Student Resident Teacher
Student Resident Teacher
Student Resident Teacher
Student Resident Teacher
Student Resident Teacher
Resident Center Teacher
Resident Center Teacher
Resident Center Teacher

-----Supervisory responsibility

Figure 2.19

that the completion of the five year program, including the two summers of specialization work, would lead to a masters degree or its equivalent, and in most states, either a permanent or provisional certificate as an elementary school teacher. Figure 2.20 shows a graphic representation of the resident year and summer specialization program, and Figure 2.21 shows a detailed description of the modules of the Social and Cultural Foundations Component of the resident year.

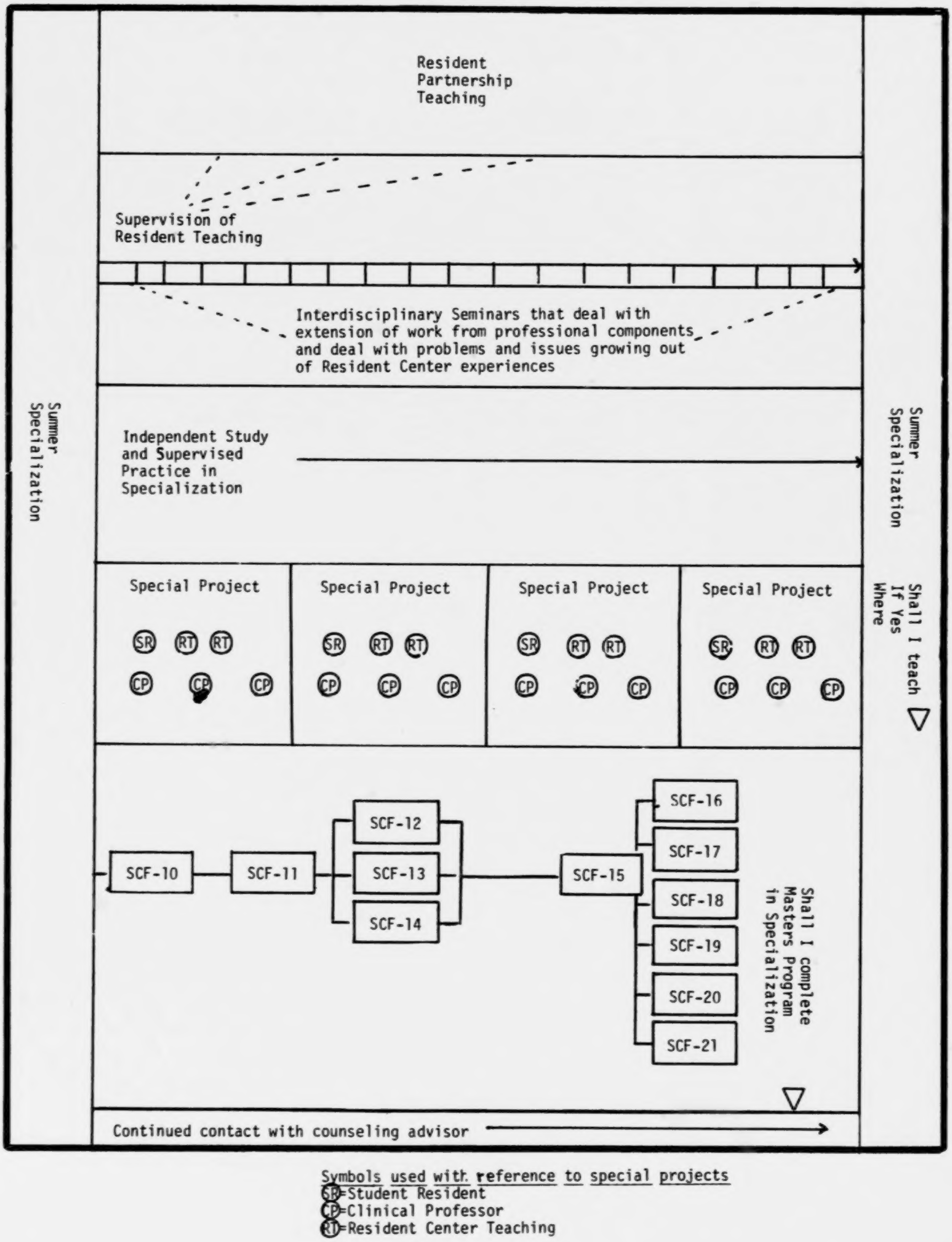
Summary

This chapter has given a general description of the programmatic structure of the model program. The program is designed to: (a) be an open system that is self-renewing, (b) train elementary school teachers so that they will be able to meet the challenges of accelerating change by responding appropriately to such changes and by creating appropriate changes themselves, (c) be process-oriented first, and content-oriented second, (d) be structured around a series of seven program components, and (e) be largely self-paced within the real limitation of self-pacing discussed in Chapter 1. The program is designed to utilize personnel from a university or a college, public schools, the educational industries, and regional laboratories and other appropriate agencies in a condition of protocooperation in which people from each of these realms of the field of education would play a special role in teacher education that would be suited to their specific talents and the facilities of their institutions. It is the position of the staff that has created this model program that only through such a truly functioning condition of multi-institutional cooperation can teacher education break away the many bonds that bind it from becoming a truly dynamic professional education. Only when university based teacher educators, teacher educators in the public schools, teacher educators in the educational industries and regional laboratories work together and plan together to create, implement, and continually modify a program for the training of teachers can a really vital teacher training program be developed.

If the reader has not already sensed an intentional progression of involvement in the real world of elementary education as an organizing structure that pervades the Model Program, he will certainly become aware of this organizing structure as he reads through the description of the program that follows in succeeding chapters. The Model is designed as a gradual induction into the real world of nursery school and elementary school teaching supported by the development of appropriate skills, knowledge and feeling states to support that induction. For example, the field experiences start with a one to one relationship of tutoring; next the student is involved in micro-teaching; in the senior professional year he is cycled through an increasingly complex set of field experiences in which he takes more and more responsibility. Finally in the resident year he shares full responsibility for a class and participates as a peer and colleague with older more experienced teachers.

The Year of Resident Teaching and Study and Summer Specialization

Figure 2.20


Resident Partnership Teaching
Supervision of Resident Teaching
Interdisciplinary Seminars that deal with extension of work from professional components and deal with problems and issues growing out of Resident Center experiences
Summer Specialization
Independent Study and Supervised Practice in Specialization
Summer Specialization
Special Project
SR
RT
CP
Shall I teach
If Yes
Where
SCF-10
SCF-11
SCF-12
SCF-13
SCF-14
SCF-15
SCF-16
SCF-17
SCF-18
SCF-19
SCF-20
SCF-21
Shall I complete Masters Program in Specialization
Continued contact with counseling advisor

Symbols used with reference to special projects

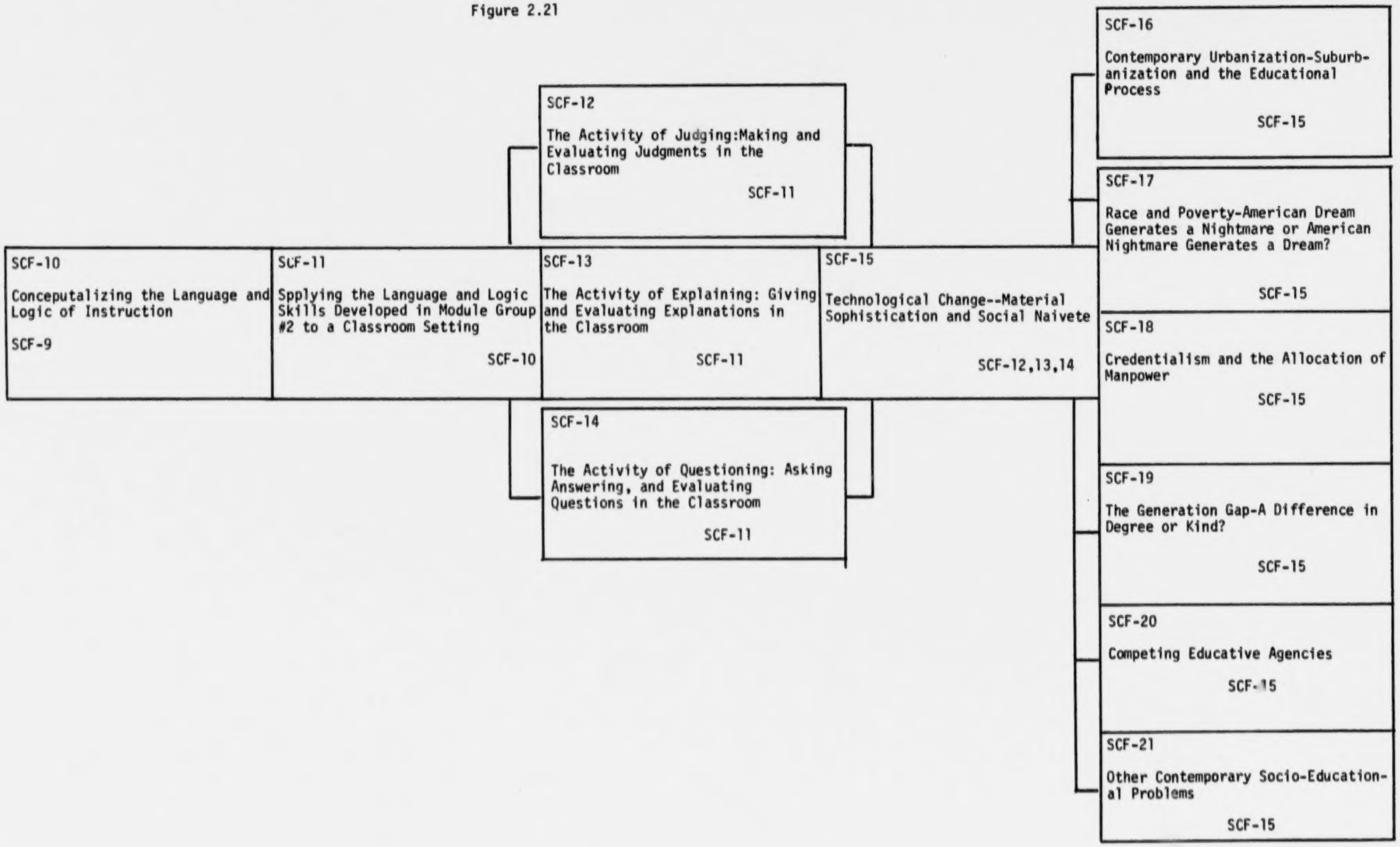
SR=Student Resident

CP=Clinical Professor

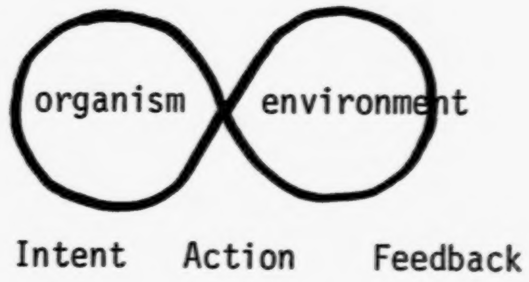
RT=Resident Center Teaching

Modular Flow Chart for the Social and Cultural Foundations Component Resident Year

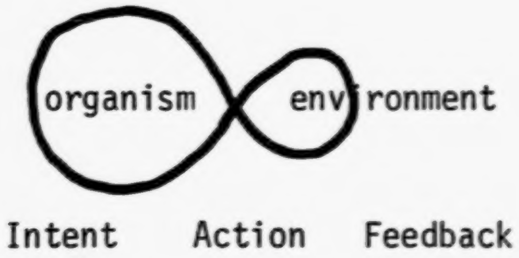
Figure 2.21


SCF-10
Conceputalizing the Language and Logic of Instruction
SCF-9
SCF-11
Spplying the Language and Logic Skills Developed in Module Group #2 to a Classroom Setting
SCF-10
SCF-12
The Activity of Judging:Making and Evaluating Judgments in the Classroom
SCF-11
SCF-13
The Activity of Explaining: Giving and Evaluating Explanations in the Classroom
SCF-11
SCF-14
The Activity of Questioning: Asking Answering, and Evaluating Questions in the Classroom
SCF-11
SCF-15
Technological Change--Material Sophistication and Social Naivete
SCF-12,13,14
SCF-16
Contemporary Urbanization-Suburbanization and the Educational Process
SCF-15
SCF-17
Race and Poverty-American Dream Generates a Nightmare or American Nightmare Generates a Dream?
SCF-15
SCF-18
Credentialism and the Allocation of Manpower
SCF-15
SCF-19
The Generation Gap-A Difference in Degree or Kind?
SCF-15
SCF-20
Competing Educative Agencies
SCF-15
SCF-21
Other Contemporary Socio-Educational Problems
SCF-15

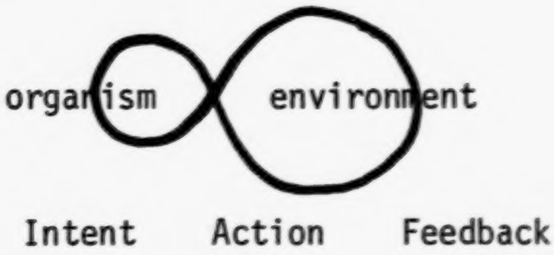
Provision has been made in the program for the student to "kick the real world and get kicked back" by providing intensive confrontation with many aspects of the real world of the elementary school teacher. There are many examples of the transactional give-and-take of the full-blown intention-action-feedback process.


organism
environment
Intent
Action
Feedback

Yet there are many opportunities to feel, reflect and wonder about the real world in private.


organism
environment
Intent
Action
Feedback

Ample opportunity has also been provided to experiment just to see what will happen; to act freely, spontaneously and creatively without a well thought out plan.


organism
environment
Intent
Action
Feedback

From all three types of situations comes the potential for the student to encounter an environment integrative of its being, interactional in the give-and-take of energies across its borders, to selectively form fresh fittings in creative, self-directed transformations.

Such an educational model depends, however, on a program that is an open system staffed by professional educators who are: (a) open to change, (b) trained to adapt to change, and (c) who are provided the time, the rewards, and the supporting structure to be able to be dedicated to elementary teacher education as a primary function of their professional life.

The next seven chapters of this report deal specifically with the rationale, structure, objectives, and educational experiences of the seven components of the model program. Each of the modules described in later chapters specifies the estimated time for completion of the module by a "typical" student. The time estimate includes direct, supervised instructional time, and independent study. In addition, estimates of university based and public school faculty based instructional time have been estimated. And finally, a scenario has been provided in Chapter 10 that describes the educational experiences of a hypothetical student as he progresses at his own pace through the model program described in this report. It is through this scenario that we hope to breathe life into an abstract, symbolic, and verbal description of a model elementary teacher preparation program that will take on living character only when it has been fully developed and implemented.

CHAPTER 3

LIBERAL EDUCATION COMPONENT

Rationale

Throughout the history of man much has been written about the nature of liberal education. Our intention is not to include all that has been thought on the subject, but rather, to discuss some of the aims inherent in liberal education.

The word "liberal" before the word "education" has several different meanings, but the definition which concerns us, however, stems from the ancient word liber. Liber means free, and a free or liberal education is constituted by those experiences throughout a person's life which enable him to transcend ignorance or limiting specialization.

What do we mean when we say that an individual can, or should, rise above the confines of ignorance or specialization? Any viable answer to this question must take into account the political process which helps shape a person's life. The political structure of the United States is organized along democratic lines, that is to say, the people are the source of power; they are free and sovereign. In order to maintain such a political status, individuals must be aware of themselves and the world around them. Realizing this, Thomas Jefferson contended that a liberal education was requisite to a democracy. He wrote, "If a nation expects to be free and ignorant in a state of civilization, it expects what never was and never shall be."

Limiting specialization, as well as ignorance, can be a barrier preventing the development of the whole citizen. In our technological society with its increased emphasis on specialization and professionalism, more and more of tomorrow's leaders are lacking breadth in their perspectives toward life. Probably from "K" to "Wit's End", that is, from kindergarten to post-graduate studies, the student is conscientiously job or specialist-oriented. He is taught that professional success is contingent on what he does in his specialty. Stuart Chase, quoting the authors of the Experimental Program in Teacher Education at Temple University, claims that:

> Specialists have distorted the environment of the world today and pulled human behavior out of scale. Although everyone is both specialist and generalist...it is the latter function that has grown more and more neglected...(26a)

The statement that the function of the "generalist" has become somewhat neglected does not imply that the specialist is not an important contributor. Could anyone validly argue that specialization has not provided an impetus toward economic expansion in our technological society? On the basis of the evidence, such an argument would be an exercise in futility. Nevertheless, one could ask, "Is the Summum Bonum of life economic prosperity? Is our infatuation with science and technology so bottomless that we are blind to other dimensions of life or alternative perspectives?" Wilbur H. Ferry directed himself to such questions in a recent Saturday Review article (March 2, 1968):

> There is where all the trouble begins--in the American confidence that technology is ultimately the medicine for all ills. This infatuation may, indeed, be so profound as to undercut everything of an optimistic tone that follows. Technology is the American Theology, promising a salvation by material works. (39:50-4)

We do not mean to create a polarization between technology and freedom. What is being suggested, however, is that the values of technological advancement and the ideals of democratic processes be balanced in such a way as to foster the development of the whole person. If ignorance and limiting specialization tend to thwart the growth of the total being, then they must be curbed. If liberal education can curb ignorance and limiting specialization, then policies which facilitate and encourage liberal education ought to be adopted.

What is, in fact, a liberal education? One can find several different definitions ranging from "precision of thought" to "sensitivity training". Our definition includes all that is implied in the term "liberal education". It is suggested here that liberal education is a process, and that it is a continuing process of achieving certain goals. Paul Dressel contends that:

> Goals of liberal education include knowledge and understanding of one's cultural heritage; facility in communication skills; development of ability in reasoning and judgment; awareness of and some competency in the various disciplines; and finally, knowledge of value differences and consciousness of one's personal values, their implications in day-to-day decisions, and their relationship to the values of others and of other socities. (36: 152-8)

Moreover, in the liberal education process, what the individual does is not as important as what he is. It is a prime aim of liberal education to create within the individual certain qualities of character, virtues, dispositions, attitudes, and habits of mind. A liberal education helps prepare an individual to recognize existing alternatives in a given situation, and to select one of the alternatives in terms of his realization of the many dimensions of his own private and public life.

The traditional policy for mediating liberal education has been through the liberal arts. The liberal arts are both practical and specific arts. They are the arts of language and mathematics; of telling time and building bridges. Liberal arts deal with the content and process of human existence.

> The liberal arts are the maturing rituals of our civilized tribe...When the liberal arts fail to do their work, civilization has become a disease. When they are dismissed as a luxury, practical affairs suffer the consequence. They are the most practical possession men have, and they proceed by method, not by knack. (26a)

The fundamental methodology of liberal arts is inherent in seven traditional disciplines divided into the trivium and the quadrivium of of classical education: grammar, rhetoric, and logic; arithmetic, music, geometry, and astronomy. It is not so much the content of these functional arts that favors liberal education, but rather, the "operation" through which these disciplines proceed that liberates the human condition. The liberal arts call men to the front line of daily life. The student of liberal arts is taught to calculate, to manipulate, to measure for precision and control. He is taught the logic of deriving specifics from generalities; he learns to establish principles on the basis of particulars. In short, the individual who partakes in liberal education comes to grips with the "stuff" of life. Hence, for the community in general and its educator-servants in particular, liberal education is indispensable.

Liberal arts are usually transmitted in liberal arts colleges. Therefore, the liberal arts college becomes an integral part of the health of the total society. "The fact is," writes James E. McClellan, (88) "that the undergraduate liberal arts college is the gateway to economic and social achievement." Some questions which undoubtedly arise are: (1) is the liberal arts college the gateway to liberal education, and (2) is the liberal arts college a vocational center? In dealing with these questions, Thomas F. Green in a recent book suggested that:

> One is tempted to view the distinction between...(what to do and what to be)...as another way of stressing the contrast between vocational and liberal education...Everything then depends upon what we mean by the terms "vocational" and "liberal". If liberal education is narrowly construed, confined to the liberal arts, then in practice it is likely to be education that is vocationally directed, toward one or another profession of scholars, historians, critics and so on. Its aim in practice, especially at the level of higher education, is thus likely to be the production of specialists in one or another field of the so-called liberal arts....Whether education is liberal, in short, has less to do with its content and subject matter than it has to do with its function and results. (55)

As Dr. Green suggests, it appears that the liberal arts are restrictive in aiding the individual to develop into a sensitive, aware human being. The liberal arts are restrictive in that they tend to be vocationally oriented with the purpose of producing specialists. Furthermore, when the liberal arts are restrictive, and tend to serve a minority of specialists, they cannot at the same time serve as the central intellectual power-plant in the university or in a democratic society. When they are functionally and liberally-oriented, they may serve this dynamic purpose. To this end, the liberal arts ought to be implemented in terms of a Liberal Education Component for a future teacher training program.

What is necessary for liberal education to truly liberate, is the inclusion of the social sciences and the natural sciences. Moreover, the orientation of the interdisciplinary approach seems to provide the student with fruitful activities which foster a genuine liberal education.

If this is the case, then this model should include a clear alternative to the traditional policy regarding liberal education, and an alternative favoring an interdisciplinary approach to liberal education.

Organization

Whatever the alternative or alternatives to the traditional liberal arts approach, none can ignore the future. There is one basic presupposition around which the Liberal Education Component evolves, that is, there is nothing certain about the future except its uncertainty. Therefore, the Liberal Education Component is constructed in such a fashion as to equip elementary school teachers with the necessary dispositions and skills to cope with future ambiguities and uncertainties. With this concern for the future in mind, let us examine the component.

A. Of course, the Liberal Education Component is not identical with the liberal arts, however, the two are related. The substance of the Liberal Education Component synthesizes the liberal arts in a manner which enables prospective teachers to know or to know how to master "the what" of teaching.

The Liberal Education Component is not professional training. Nevertheless, there is a necessary connection. The Liberal Education Component has in its structure basic methodological approaches which provide examples of self-directedness and self-reliance to students. The hopeful result is that potential teachers will come to know the "methods" of learning and teaching.

B. The Liberal Education Component is a combination of liberal arts and professional training. The component seeks the best in each area in order to create a reasonable and effective program for students who might well be future teachers. The question could be asked, "Does this component apply exclusively to elementary school teacher training?" The answer is an emphatic, "No!" Medical students, students of engineering, general liberal arts students, etc., would certainly benefit from the Liberal Education Component. There is no doubt that this approach to liberal education could be valuable to a number of professional programs.

However, since our concern is with elementary teacher preparation, we shall consider the Liberal Education Component as a necessary part of the background of any elementary school teacher candidate entering the program.

C. How is the Liberal Education Component different from liberal arts and professional training? It is different in that it provides:

(1) a combination of liberal arts and professional training

(2) an emphasis on the development of the individual as a whole person

(3) the inclusion of the natural sciences and social sciences as well as the humanities

(4) an interdisciplinary approach to the humanities, social sciences, and natural sciences.

D. In planning the Liberal Education Component, it was decided on the basis of available evidence, that students of elementary education would benefit more effectively by a structured liberal arts curriculum program conducted during the freshman, sophomore, and junior years. There were several reasons for this decision:

(1) The first three years of academic work are generally oriented toward the traditional liberal arts college course offerings. This being the case, the Liberal Education Component would be in harmony with the calendar sequence of the college of liberal arts. Therefore, the student's experience in his freshman, sophomore, and junior years would be in concord with other university activities.

(2) In any university, students must meet certain requirements which are often satisfied in the first three years of student enrollment. The matter of prerequisites is a matter of policy which designates prerequisites in chronological order. If a student were not to successfully complete pertinent requirements, then it is more than probable that the student would not be a successful candidate in the Elementary Teacher Training Program. Therefore, the Liberal Education Component serves as a pre-selection center for potential candidates in the program.

(3) The Liberal Education Component acts to facilitate a student's awareness of himself in relation to his liberal arts background and his pre-professional and professional training.

(4) Inherent in the model is an underlying motif which is expressed in the other components, and is germaine to the structure of the Liberal Education Component. The motif is that effective elementary school teachers must have the capacity and ability

to realize existing alternatives in a given situation and to make reasonable decisions. Let us look for example, at some of the components in the model:

THE CHILD DEVELOPMENT COMPONENT (CD-3)

The purpose of this module is to provide the student with the introductory skills of making reliable closed observations of children's behaviors. The general objectives of this module should prepare the student to do the following:

a. Record reliably whether: (1) a specified event occurred within specified time spans for an individual or a group being observed, or (2) which of a selected taxonomy of behaviors were exhibited by the individual or group being observed (in both time sampling and point-time sampling format).

b. Summarize on a table or graph the comparative frequencies of behaviors for different individuals or for the same individual on different categories.

THE SOCIAL AND CULTURAL FOUNDATIONS COMPONENT

Although education about our schools is needed by all, it is most needed by those who hold the office of teacher, for the decisions of teachers and others involved in the formal schooling process increasingly determine the life chances of children... Thus, the competent teacher, as described in this model, recognizes that the practical and intellectual aspects of problems are not mutually exclusive. He knows that although it may not be possible to reflect and study before acting in a classroom, reflection is necessary in order to evaluate his actions intelligently.

THE TEACHING THEORY AND PRACTICE COMPONENT

It is assumed that teaching is a decision-making process by which the teacher interacts with pupils, materials, subject matter content, and the school administration to achieve certain results. This component of The Model Teacher Preparation Program focuses on a set of skills needed to make teaching decisions (to resolve problems arising in the classroom).

THE PROFESSIONAL SENSITIVITY TRAINING COMPONENT

The content of the Professional Sensitivity Training

> Component is based on the notion that the effectiveness of an elementary school teacher is in great measure determined by his ability to make sound instructional decisions...

These four examples are illustrative of the need for instruction in "decision-making" abilities.

In summary, the Liberal Education Component has four primary functions:

(1) To provide a liberal education for prospective elementary school teachers, and to coordinate the model program with other university activities.

(2) To act as a selection center for potential candidates, encouraging those who meet the necessary requirements to enter the pre-professional program and to encourage those who do not meet the requisites to seek other alternative opportunities.

(3) To develop student awareness of the role that liberal education plays in elementary education.

(4) To develop perceptions and skills which are integral to successfully completing the Elementary Modeling Program.

E. To be more specific about the relationships between the "substance" of the liberal arts and the "methods" of professional training, it is important to consider the structure in the Liberal Education Component.

The component structure is composed of three delineated courses, each lasting for one academic year (six semester hours per course). They are: the Humanities, the Social Sciences, the Natural Sciences. Each course has, among other things, an espoused philosophy with recommended topic selections supporting that philosophy. Also, each course has relationships between the substance of liberal arts and the methods of professional training. Let us first examine the Humanities, then the Social Sciences, and finally, the Natural Sciences.

The Humanities

"Changing Perspectives within the Humanities" would propose to increase the student's awareness of the major concerns, the rival attitudes, and the significant tendencies and discoveries men have experienced in attempting to understand themselves, their relations to others, and the world in which they live. The course aims to provide the student teacher with an enriched fund of ideas and examples, an increased patience and power to accomplish that conversion of mind which teaching entails. This course also aims to promote in the potential teacher a deeper understanding of a greater responsibility for humanistic ideas and values central to our changing culture.

During the first semester the student might be introduced to three possible methods of inquiry: (1) the study of a piece of literature according to its structure, genre, levels of meaning, variety of implications, and critical appraisals made at various times during its history; (2) the nature, art, and value of definition in its relation to terms, concepts, and values associated with the humanities; and (3) the study of changing perspectives within two major areas of value, science and religion.

Science is considered with the purpose of demonstrating the variety of views,of understanding the "pretensions" of assessing the role, and of attempting to define the goals associated with the "most real of realities" in our day. Religion is considered from the view of demonstrating the primary principles of the major contemporary religions, presenting the major contributors to the development of the Judaeo-Christian tradition, and interpreting the contemporary views of Christian theology and Christian practices in the progressively pluralistic tension of world faiths and cultures.

The first semester is so structured as to offer the student opportunities to develop "decision-making" skills in dealing with complex issues fundamental to the humanities. Choices of interpretations, methods, and understandings sometimes lead to paralysis of the mind when a student is faced with relativism. The origin of choice or decision, however, is in activity. The activity of the mind created from diverse opinions, principles, institutions, and cultures can generate the faculty of wonder within the student. The humanities course would provide a stimulus for the student to wonder at and to be knowledgeable of man's predicament. In the last analysis, the student shapes his own character on the basis of decisions he makes about examples he has witnessed in literature and in daily affairs.

"Man and His Civilization" is the basic theme with the following variations. Such considerations as "The Doctrines of Man", "The Nature of Civilization", "The Dream of a Perfect Society", and "Group Pressures and Civil Disobedience" provide examples of basic motifs in the first semester. Furthermore, concepts relating to "Perception in Art", "Creative Expression in Painting", "Creative Expression in Music, Architecture Engineering and Urbanization", "The Individual and the State", and "The Individual and Society" enhance the emphasis on man and his civilization.

Such an organization would provide an opportunity for students to view the role of education in the specific areas of music and art, but also in civilization in general.

During the second semester, the course proceeds from the foundations of the first semester into more abstract and philosophical considerations. These more general considerations are made specific by associations with specific works of literature, pieces of art, and scientific and political theories and practices. In a sense, during the first semester the student works with quite specific materials to make generalizations; during the second semester, the reverse is true--the student works with generalizations that require specifications and application to define values and to discover standards for his judgments.

During the semester certain "modes" of reality are the subjects of the following investigations: (1) the reality created by the individual privately, the imaginative, the aesthetic--the arts; and (2) the reality occasioned by the condition of men moved to live peacefully and fruitfully together, political freedom, and responsibility.

The fine arts are considered as realities created by the imagination of the artist to arouse the deeper emotions, to exercise the higher intellectual faculties, and "to give meaning to living". The matter of freedom and responsibility concerns the political philosophies of our day, the status of the agencies of communication in a free society, the freedom and responsibility to be accorded the scientist, the artist, and the teacher in our society.

The second semester might be entitled, "The Exploration of the Subjective: Man's Discovery of Self". Underlying this theme is the recognition that each individual, including the prospective elementary school teacher, must be aware of himself and his potentials and limitations as a human being.

Thus, the second semester utilizes certain philosophical considerations. Attention is given to such topics as "The Protestant Ethic", "The Faust Myth: Man's Dual Nature", "Psychiatry and Religion", "Meaning in Art and the Function of the Critic", and "Creativity: the Self and the Social Milieu". Also, concern with such areas as "Absolute and Relative Myth: Levels of Interpretation", "Transgression and Suffering", and "The Epistemological Riddle: Can the Mind as an Instrument of Knowing Know Itself?" serve to add greater dimension to changing perspectives in the Humanities.

The Social Sciences

"Changing Perspectives in the Social Sciences" brings the techniques of scientific observation and objectivity to bear on the problems of man and his ever-changing social environment. Each group of people, each national group, each religious group, each social group, has values that differ from those of other groups.

The people of China, of India, of Arabia have similar ambitions, similar desires, similar needs, and these are similar to those of the people of the Western world. They need food and shelter; they want freedom and security. Because of the greater ease of communication, their awareness of need has expanded, but their method of expressing these wants and desires is dependent on generations of tradition and habit which make them react differently to similar problems. Climate, religious practices, temperament, biological and social heritage all contribute to these differences.

As long as they did not know that their deprivations were greater than those of other people, they were content even though starvation was imminent and economic slavery was the custom. However, when the rest of the world opened up to them they became restive.

Everywhere in this world where "have not" people have become conscious of their wants, they have also become aware of their rights, and in this awareness revolutions are bred.

During the 19th and early 20th centuries new bodies of knowledge were introduced into our school curriculum; first history, then political science, followed by economics, sociology and anthropology. Each body of knowledge acquired a technical vocabulary to express its principles. The more highly specialized each body of knowledge became, the more it moved from reality to theory and abstraction.

One purpose of the Social Science course is to help student teachers examine the efforts of man to strive for greater knowledge, and through the attainment of these efforts to live at peace with his fellow man. Such an attainment necessarily implies control of future probabilities. If man and nations are to control themselves, they must have the capacity and disposition to do so.

By having instructors, who are specialists in several fields, examine jointly the social, economic, and political problems arising from the process of living in a much-contracted world, students will broaden their views, and thereby become more effective teachers of the pupils entrusted to their care.

"Changing Perspectives in the Social Sciences" can be an integrating force of the first order. It attempts to draw on the students' experiences and dispositions to achieve full awareness of self and society. An understanding of both the history of social thought and methods of social research provides adequate foundations from which considerations of the following are made. "Theories of Man", "Theories of Social Change", "Traditional and Modern Societies", "Basic Economic Concepts, Economic Development, and Modern Economic Systems", "Basic Political Concepts, Political Development,and Modern Political Systems", and "Social Stratification and Socialization" are but a few issues which fall under the umbrella of the social sciences. An ability to deal with such topics is necessary for those who are potential elementary school teachers.

If the classroom of any school is representative of multifarious interests, then the teacher must be knowledgeable of those interests. If the teacher is to guide change within pupils, he needs at his command cognitive awareness and affective sensitivity to social and individual problems. Thus, it becomes requisite to involve a student in a program with such issues. "Introduction to Social Problems", Technological Change", "Bureaucracy and its Implications", "Power in Society", "International Politics", "Population", "Economic Mobility", "Unionism", are illustrative of the types of focal points around which "Changing Perspectives in the Social Sciences might evolve. Also, "Poverty in America", "Crime and Violence in America", "Race and Ethnic Relations", and the "Changing Moral Climate" offer the student ground from which to develop reasonable attitudes and skills when making decisions about such perplexing problems as these.

Most would agree that a teacher provides an example. The only valid argument is whether a teacher sets a good example or a poor example. If an elementary school teacher is to offer good patterns of behavior, his comprehension of the issues and methods in the social sciences should be evident in his own behavior as a teacher.

The Natural Sciences

The natural science course is organized to give those whose science education is very sparse an understanding of the areas in which the scientist is devoting his energies, what his method is, what limitations there are to findings, what further knowledge and experimentation he needs in order to make his conclusions valid. Thus, one witnesses that examples of scientific methodology provide fruitful material in dealing with change and "decision-making" problems.

What is known about the effect from "fall-out" due to atomic experimentation on the present and on future generations? To obtain an adequate answer, the geneticist, the physical scientist, and the philosopher need to share their views with the student.

Is there any merit in our concern about the worlds beyond? What answer is given by the astronomer, the physicist, the religionist?

How far can we expect to extend the process of communication? The physicist and the psychologist have extended our frontiers in this field; is there more to come?

Man's life span has been greatly increased in recent years, and ever-increasing life spans are expected in the future. Through what means? Are there limits? What answer does the biochemist have to offer?

Perhaps most important of all is the question: What is the "Scientific Method?" Are there discrete scientific methods for different sciences? Have the scientists really discovered the very method of discovery itself?

These are but a few of the questions. For the prospective elementary school teacher with a limited science background, this course would serve as an eye-opener, and as a practical integrating experience.

The course "Changing Perspectives in the Natural Sciences" is structured along conceptual lines. The origins of scientific thought viewed by a natural scientist, a chemist, and a physicist would give the student a macro-perspective of the nature of this facet of the Liberal Education Component. In the first semester, considerations of such things as "Early Views of the Universe", "Later Concepts of the Universe", "Origins of the Universe", "Nuclear Structure and Radioactivity", and "Atomic Structure and Chemical Bonding" stimulate the kinds of activity which eventually lead to fundamental understandings of the natural sciences. Furthermore, such background material provides a better grasp of such topics as "The Mind of Man", "Structure of the Earth", "Origin of Life", "Man the Measure", and "Perception and Reality--Past and Present Techniques".

The prospective teacher views himself as a part of a large period of scientific development with man as a measure. Such involvement tends to create an identity with the significance of natural science for the student in particular and for his future pupils in general.

During the second semester, topics of worthy importance might be dealt with accordingly. "Classical Genetics", "Modern View of Mendelian Genetics", "Chemical Genetics", "The Chemistry of Life", "Matter: Substance or Form?", and"Order from Disorder, Order from Order, Change, Causality, and Free Will", create stimulating topics for the natural sciences. Moreover, further possible topics might include "Evolution of Evolution", "Effects of Nuclear Weapons", "Nuclear Power", "Theories: The Mythology of Science", "Science: Creator or Destroyer?" and"Decision-Making in the Nuclear Age".

Regardless of the terminology used in structuring topics for the changing perspectives in the natural sciences, the course should be so organized as to build concepts which influence the development of skills and attitudes that will be helpful in enabling a student to become an effective professional leader.

The relationship between the substantive of the Liberal Education Component and pre-professional and professional training becomes clear when one regards the particular pre-professional and professional training components.

For example, undergirding the Methods and Curriculum Component is a basic assumption: "It is expected that the successful completion of the student's liberal arts program and the Liberal Education Component's courses in the Humanities, the Natural Sciences, and the Social Sciences will give the student sufficient foundation upon which to base his understanding of elementary curriculum content." It is, therefore, imperative that students have competency in various subject matters of the liberal arts.

In the first module of the Methods and Curriculum Component, student proficiency in six subject areas is checked (English, Social

Science, Physical Science, Biological Science, Mathematics and Earth Science). If the Liberal Education Component performs its functions well, then the student will undoubtedly meet the proficiency requirements set for those six disciplines. If, on the other hand, the student demonstrates a deficiency in a subject area, then he will be prescribed specific tasks to make up for that deficiency. Any prescribed task should be performed while the student is simultaneously going through the various modules of the Methods and Curriculum Component. Furthermore, the Liberal Education Policy Board would be advised that it might make necessary changes to alleviate further discrepancy in student abilities. (Reference to the Policy Board is made earlier in this chapter).

Another specific example which sheds light on the relationship between "methodology" in the Liberal Education Component and professional training is seen in the Child Development Component (Module #1). "The general objectives of this module should prepare the student to do the following:

(A) Record full descriptions of observed child behaviors (B) Recognize that statements about child behavior are not "pure" reporting practices. If these broad objectives are achieved, the student should, for example, be able to do the following:

1. Identify in his own written reports and the reports on children's behavior and the reports of others those portions which are inferences or evaluations.

2. State at least three reasons why the reports of the same situation written by different individuals will have substantial variations regarding what was observed."

A successful completion of this module requires skills in observing and skills in making sensible judgments. Since the Liberal Education Component stresses observation techniques and evaluative skills, the student can anticipate rewarding pre-professional and professional training in this module in particular, and in the program "in toto".

Although these are but two examples demonstrating the relationships between the Liberal Education Component and the program of pre-professional and professional studies, they are sufficient to note the necessary bearing each has upon the other. These relationships tie the program into a harmonious union designed to develop the best of possible elementary school teachers

The Liberal Education Component in Operation

A. Organization

Among the several notions regarding the organization of the Liberal Education Component, the following is suggested as a constructive approach to achieve maximum effectiveness. (See Figure 3.1).

Referring to Figure 3.1, the reader finds the director at the head of the organizational chart. The director is chairman of the policy board. The policy board consists of members of the faculty in the three disciplines comprising the course content in the component. Also, administrative members from the College of Education and College of Liberal Arts should be represented. It is suggested that the policy board would benefit by having a delegate from the student body on the board. It is the function of the policy board to:

a. Carry out the objectives stated in the Liberal Education Component. The policy board might meet once every month to gather all data necessary for determining how well aims were being realized. In addition, students who were having difficulty or who, for any other reason, needed special individual consideration would have the opportunity to be reviewed by the board.

b. Set curriculum policy. The policy board would meet from time to time to view the nature of the Liberal Education curriculum. Changes in requirements, changes in political and social trends in the world, and changes in student orientation might warrant commensurate change in curriculum structure.

c. Develop evaluation methods in order that the program might continuously improve its quality and effectiveness. Such procedures as using student evaluation sheets and policy board reports should serve to enhance the overall operation of the component.

Following the policy board in the hierarchy on the organizational chart, are the disciplines of the Liberal Education Component -- the Humanities, the Social Sciences and the Natural Sciences.

Since universities and colleges differ in admissions policy, it would be presumptuous at best to set a guideline for student admission into the component. Therefore, it is recommended that each institution set its own requirements. Hence, the character of the student body would reflect the particular policy of the potential adopter.

Last in the diagram is the advisor category. Each student should be assigned to an advisor who would counsel the student throughout the student's Liberal Education Component program. Such advising would run the gamut; from advice on coordination of the Liberal Education Component activities with liberal arts courses, to assistance with information concerning pre-professional and professional studies. The advisor's function would be taken over by the advisors of the Self-Directed Component when the student entered pre-professional training.

Organization of the Liberal Education Component

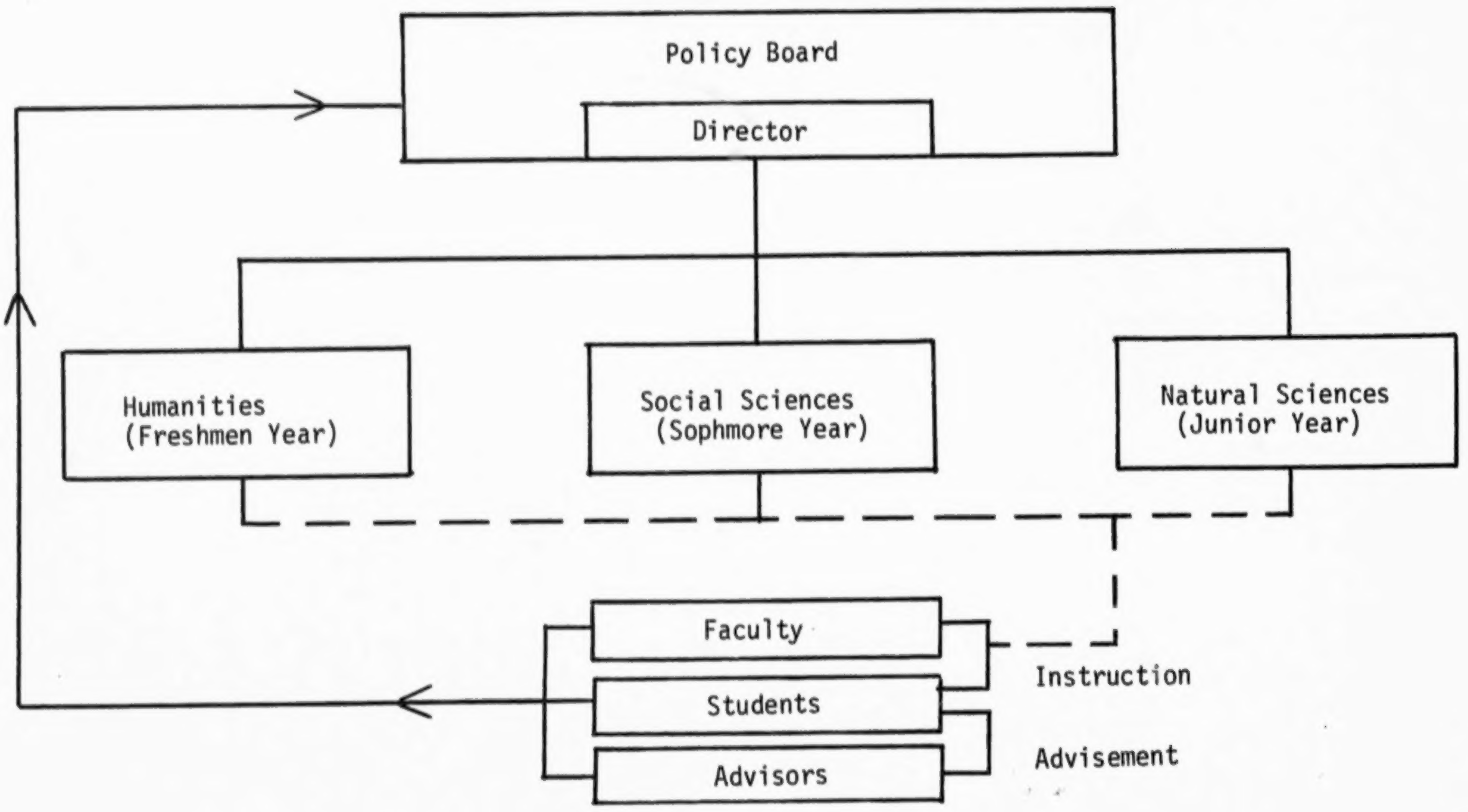

Policy Board
Director
Humanities
(Freshmen Year)
Social Sciences
(Sophmore Year)
Natural Sciences
(Junior Year)
Faculty
Students
Advisors
Instruction
Advisement

Figure 3.1

B. Structure

The structure of this component is divided into three courses, namely the Humanities, the Social Sciences, and the Natural Sciences. The Humanities might be taught in the freshman year; the Social Sciences might be taught in the sophomore year; the Natural Sciences could possibly be offered in the junior year.

A course might then be divided into panels. Each panel should consist of three professors representing their respective disciplines. One panel would be responsible for forty-five students. The students would meet with the panel twice a week to attend a lecture series given by a panel member. Then the group might sub-divide into a seminar with one professor and fifteen students taking part. It is in the seminar where students might discuss issues and answers to problems raised in the lecture series. The professor would act as moderator to student-directed discussion. Continuous dialogue between educator and student provides not only a measurement for student development, but also encourages the awareness of "substance-method" relationships.

C. Personnel

Since the Liberal Education Component draws from both liberal arts and professional training, it is reasonable to assume that the faculty of the Liberal Education Component represent whatever disciplines are involved. At any rate, it is recommended that the faculty be staffed by those who could best fulfill the objectives of the component. It is further suggested that the regular faculty be supplemented by guest lecturers when appropriate. Such a supplement might add variety and stimulation to the total program.

D. Administrative Relations

The policy board, as mentioned above, should consist, at least in part, of administrators from the College of Education and the College of Liberal Arts. If the program is to be a viable one, then it should be represented by all possible interest groups concerned with the program. Cross administrative connections would perpetuate communication and effectiveness between the two distinct university faculties.

E. Professional Program

There are various ties between the Liberal Education Component and the professional program. These ties are both substantive and methodological. The component is organized and structured in such a way as to enable the student to enter and successfully complete the professional program in elementary teacher training.

It could be argued that there is no need for a Liberal Education Component, but any such argument must necessarily fail to take into account the prime purpose of the model, namely, to develop effective self-directed elementary school teachers. If elementary school teachers are to be both effective and self-directed, then they must have a liberal education. Since it is the case that traditional liberal arts policy tends to limit liberal education to specific disciplines, it is imperative that alternatives be developed. If the alternative offered in the Liberal Education Component can help fulfill the aims of liberal education and of professional training, then it ought certainly to be an asset to the education of elementary school teachers.

The Liberal Education Component and the Future of the Individual Elementary School Teacher

As much as one might care about what happens in the future of American schools, there is little one can know about what will in fact take place. Earlier a basic assumption was mentioned, "There is one thing certain about the future--its uncertainty." Although this assumption seems to be a paradox, it is nevertheless, a valid statement. Since technological advancement has tended to create a cogent public attitude toward favoring change, it has become necessary to develop schools which are disposed to set examples of responsible change. Change breeds progress, and progress implies discovery, but the greatest discovery in any institutionally oriented society is self-discovery. If in an age of change and progress a citizen cannot rely on political or social dogma, he must rely on himself. Self-discovery, self-awareness, self-reliance, and self-confidence are old democratic concepts, but they are concepts which fit our time. These are concepts which must be reinterpreted in socio-technological contexts.

With technological and social change continually re-shaping our society, it becomes supremely important for the individual to rely on himself as an intelligent member of the electorate in a democratic society. Such a reliance sets a mandate upon the individual for moral responsibility. Regardless of whatever uncertainties people face in the future, they must be certain of their moral judgments and responsibilities to the community.

People are not born with dispositions to behave in particular ways. Rather, they learn actions, attitudes, and dispositions. If the future is uncertain, and if people learn attitudes, and if elementary schools play an important role in the development of attitudes, then it becomes requisite that elementary school teachers engage in activities which encourage dispositions toward self-directedness and self-awareness. This is, in part, what the Liberal Education Component attempts to do.

CHAPTER 4

METHODS AND CURRICULUM COMPONENT

Rationale

Methods and Materials

The concept of methods and materials in the present program is intended to go somewhat beyond the "how and what" of the more traditional teacher preparation programs. Since the graduate of this program is viewed not as a technician who merely applies the skills taught to him, but as a practitioner who adapts methods and materials to his own personality and to the learning situation at hand, the emphasis will be placed on making techniques and materials available to the student, and then placing him in situations where he will have to make decisions as to which methods and materials are the most appropriate to use.

The student will be exposed to methods and materials early in the pre-professional year; however, the heaviest emphasis will be during the senior professional year. The earliest contacts with methods and materials will be designed to acquaint the student with available materials, the ways of using them with pupils, and the ways of assessing pupil performance. The major purpose of placing this component early in the program is to give the student specific instructional skills and curriculum-related referents for: (a) tutoring children in the Tutorial and Micro-teaching Centers, and (b) the theoretical materials he will be learning in the fields of instructional theory, human development, and social-cultural foundations and sensitivity training.

During his pre-professional instruction, the student will increase his direct contact with pupils as he progresses from a one-to-one tutorial relationship to microteaching. Upon entering the senior year of the program, the student will begin to develop ways of dealing effectively with instructional problems of increasing complexity until he becomes an independently competent practitioner.

During his senior year the student will engage in a wide variety of exploratory teaching experiences. Each of these experiences is structured around the concept of team supervision. This concept as it is used in this model is similar to the concept reported by John Readling (102) though it differs in that in this model more responsibility is placed on the student to determine the type of feedback he desires in order to give personal direction to his unique professional growth.

The team cycling concept was discussed in Chapter Two. The reader will recall that the team includes the student, another student partner, the clinical teacher and one or more clinical professors. In the cycling process, feedback and evaluation pervade the entire experience, and the student repeats the experience under several different teaching and learning conditions. Thus, modules CM-11 through CM-16 are repeated in different types of educational settings until the student gives evidence that he can generalize his skills and knowledge for a variety of teaching-learning situations.

The senior year will also provide the student with experiences and techniques in the area of curriculum decision-making and evaluation. Training in this area is expected to be advantageous since the teacher's role in curriculum decision-making is expected to increase sharply in the immediate future.

Although, in a certain sense, the Methods and Curriculum Component does not continue as such into the resident year, a major portion of the resident student's time will be spent in supervised partnership teaching, and in application of his specialization in elementary education in special projects. Diagnosis and remediation of learning difficulties, early childhood education, or elementary guidance are a few examples of what might be fields of specialization for some students. Other existing specialties may also be examined, or specialties not now in existence may be developed and pursued by the resident students.

Competency in Subject Matter

The problem of helping students to gain competency in the subject matter of education has already been approached in the foregoing description of the Liberal Education Component. It is expected that the successful completion of the student's Liberal Arts program and the Liberal Education Component's courses in the Humanities, the Natural Sciences, and the Social Sciences will give the student sufficient foundation upon which to base his understanding of elementary curriculum content.

As a check of this expectation, a series of evaluative devices based upon concepts in the curriculum fields of English, social studies, mathematics, and general science will be administered to all students during the pre-professional year. Wherever weaknesses are indicated, the student will be provided with programmed learning experiences. These programs will be designed for self-study, and achievement in them will be tested with post-evaluative devices.

The data obtained from the pre-tests administered in the several curriculum content fields would be, as stated in the Liberal Education Component description, fed back into that component's program through the Liberal Education Policy Board.

Teaching as Problem Resolution

In this component of the model, teaching is characterized as a continuing process of problem resolution. The Methods and Curriculum Component will be presented to the student in this light. The term "resolution" rather than "solution" is used here because it implies a continuing process whereas solution implies a final disposition of the problem. It is felt that in teaching, problems are acted upon in such a way that their nature changes, the change requiring a new course of action.

A Problem-Resolution Model for Teacher Education

In a world of rapid change, it is generally felt that mastering the process of acquiring and utilizing knowledge and skills is far more important than the specific knowledge and skills acquired. The adult who can apply effective new approaches to new situations is better off than the one who has been intentionally or inadvertently trained to try to make new situations fit old approaches. Faith in the validity of this assumption leads to the development of a model for teacher education which emphasizes the process of learning rather than its substantive content per se.

The process of learning discussed here is synonymous with the problem-resolution approach. In the present program, this approach is valid for all effective learning processes in teacher education, and it is thought to provide the greatest opportunity for transfer to new situations.

Problem-resolution may be defined as the search for and implementation of a resolution to a practical problem requiring remedy. The problem arises from a conflict between what actually is, and what could or should be. A resolution of the conflict rather than an absolute solution to the problem is proposed. This approach concentrates on determining the most effective means of conflict resolution within the problem situation. Effective means are based on evaluation of the resolution in terms of criteria established in the initial approach to the problem situation. These means include taking account of the essential elements of the problem, and the resolution of them will include a degree of predictability for further application to new situations.

All learning processes may be said to involve four steps: (1) input; the assimilation of information, concepts, and principles, (2) utilization; the selection through synthesis of the input, (3) output; the application of information structured in the utilization phase, and (4) evaluation of the output in terms of validity, reliability, utility, or refined perception. Problem-resolution also involves these same four steps, but the difference lies in where the cycle begins, and the emphasis is placed on the first step. In problem-resolution, the learner does not begin with input, but with evaluation which is viewed broadly as a task which begins with identifying the problem, and then developing criteria to be used later in evaluation of its resolution. Before seeking input, the student must face the problem and develop criteria for its resolution. When he enters the input phase of the process, he is already immersed in the learning task; he is seeking input with a well-defined, meaningful purpose.

A more specific discussion of each of the four phases of the cycle will appear in a subsequent section. However, a general acquaintance with the four phases is necessary at this point to emphasize a second crucial aspect of the proposed problem-resolution model; that is, the feedback aspect of the model.

Once the student has established and gathered input, he may identify a need to redefine the problem or refine his criteria; this may in turn indicate a need for more input. Eventually he progresses to the utilizer phase of the program in which he tries to structure his information in terms of his criteria. This may send him back for more input, or send him directly (or indirectly through input) to his criteria. The utilizer phase finally leads to output or to a final product which may require direct or indirect return to any or all of the previous steps, but which leads ultimately to evaluation in terms of criteria initiated by the definition of the problem, and refined by going through the process of the other phases. The model is presented graphically in Figure 4.1.

This is not a lock-step process. The model provides for continual feedback and refinement as the student goes through each step. For example, just as output is viewed as a functional resolution of the problem conflict, input is viewed as a tentative pool of information which may require further development as the student goes through the other steps in the process.

The problem-resolution model requires a flexible teacher education program dedicated to producing teachers who can become change agents. It offers a unique combination of advantages which can develop commitment to change on the part of the teachers. The model emphasizes learning and not teaching in the most traditional sense, but because the input and utilizer phase of the model stress guided learning, the student is "taught" as he will"teach"; that is, students who go through the program will hopefully use the same approach with children.

The following are envisioned as strengths of the problem-resolution model:

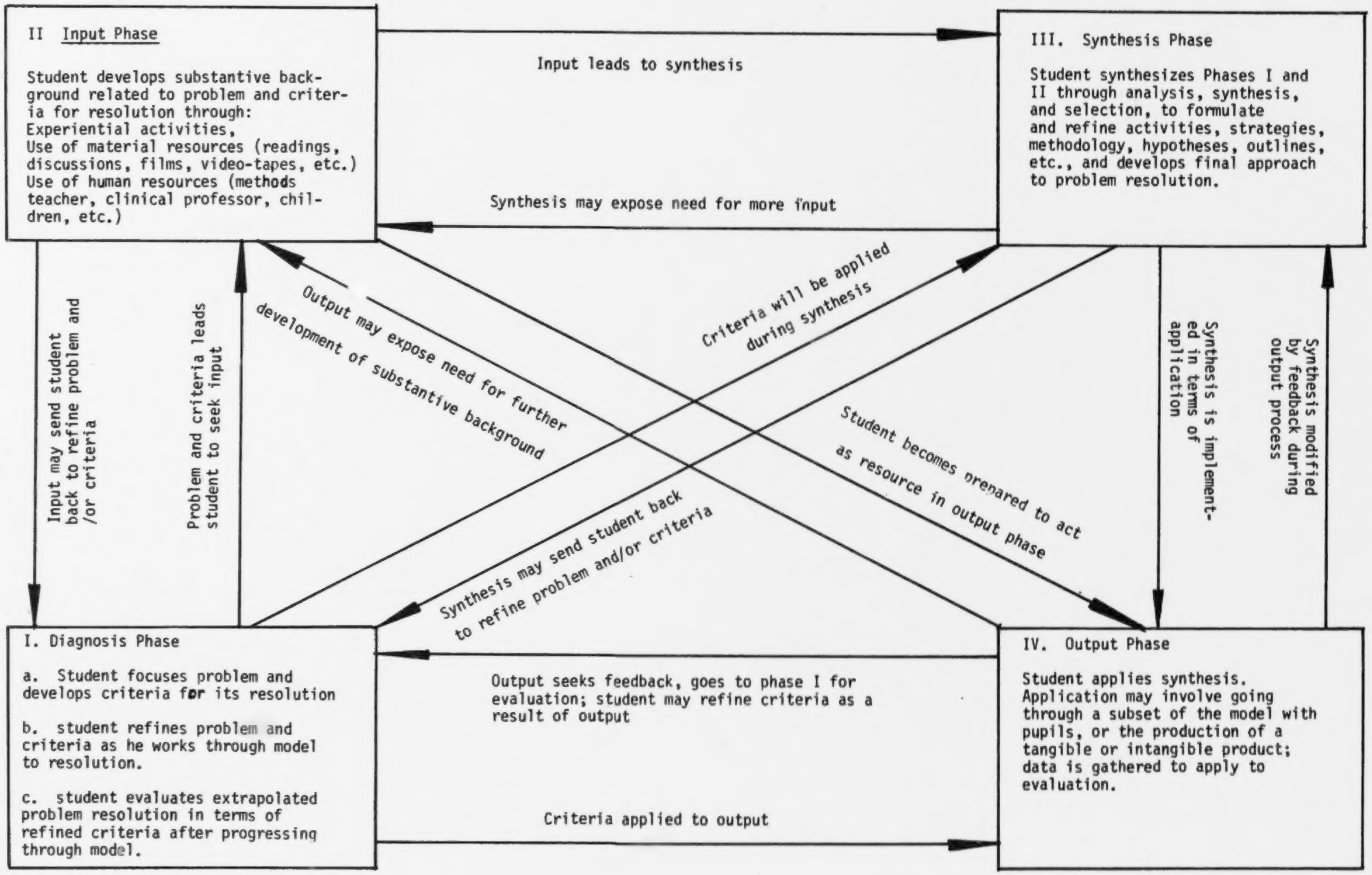
1. It starts with broad aspects of evaluation, thus relegating input to a functional-resource position.

2. Feedback is continuous to the learner, and those involved in resource utilization.

3. It provides opportunity for traditional approaches when (and only when) they are deemed appropriate.

4. It provides opportunity for innovation and creativity as called for by the problematical learning task. (For example, the model would not demand creativity for its own sake, but rather for creativity only in application to a real situation.)

A Problem Resolution Model Figure 4.1



II Input Phase

Student develops substantive background related to problem and criteria for resolution through:
Experiential activities,
Use of material resources (readings, discussions, films, video-tapes, etc.)
Use of human resources (methods teacher, clinical professor, children, etc.)

III. Synthesis Phase

Student synthesizes Phases I and II through analysis, synthesis, and selection, to formulate and refine activities, strategies, methodology, hypotheses, outlines, etc., and develops final approach to problem resolution.

I. Diagnosis Phase

a. Student focuses problem and develops criteria for its resolution

b. student refines problem and criteria as he works through model to resolution.

c. student evaluates extrapolated problem resolution in terms of refined criteria after progressing through model.

IV. Output Phase

Student applies synthesis. Application may involve going through a subset of the model with pupils, or the production of a tangible or intangible product; data is gathered to apply to evaluation.

Input leads to synthesis
Synthesis may expose need for more input
Input may send student back to refine problem and /or criteria
Problem and criteria leads student to seek input
Output may expose need for further development of substantive background
Criteria will be applied during synthesis
Synthesis is implemented in terms of application
Synthesis modified by feedback during output process
Student becomes prepared to act as resource in output phase
Synthesis may send student back to refine problem and/or criteria
Output seeks feedback, goes to phase I for evaluation; student may refine criteria as a result of output
Criteria applied to output

5. It is applicable to any chosen priority of learning tasks.
6. It provides for individual needs and differences as specified by the modular approach of the program.
7. It is dynamic in that it incorporates the essence of change within it.
8. It immerses the student in problem-resolution experiences, thus facilitating the transfer of such experiences to pupils.
9. It immerses the student in his task and makes input more meaningful and relevant.
10. It is circular within itself, and provides, through the extendability of phase I, a channel for union with subsequent problem situations.

Problem-resolution does not dictate methods of instruction. It forces the student to develop or request instructional techniques which relate to the nature of the problem. It encourages teachers and pupils to view new situations with an open-minded approach focusing on process and problem-resolution as opposed to absolute knowledge and solution. Only under such conditions can a teacher truly become a change agent.

As Bloom, Krathwohl, and others suggest, a curriculum designed to prepare people to cope with and effect change must stress the transfer of learning to new situations.

> The general consensus seems to be that training will transfer to new areas most readily if the person is taught in such a way that he learns good methods of attacking the problems; if he learns concepts and generalizations (rather than how to use certain facts in specific instances), if he learns proper attitudes toward work, and if he develops proper attitudes of self-confidence and control. It is obvious that the objectives in the application category, as they embody the meaning of transfer of training, are extremely important aspects of the curriculum. Further, the evaluation of the extent to which the application outcomes are being achieved becomes one of the most important aspects of the entire evaluation process. For, to the extent that the evaluation process gives information concerning the success or failure of this aspect of the curriculum, evaluating provides a feedback for future curricular revision. (16)

Problem-resolution is offered as the model to produce just such revision.

Phases of the Problem-Resolution Model

Phase I: Diagnosis

In this phase the student faces and defines a problem and develops criteria for its resolution. The criteria are then refined as the student works through the other phases of the problem-resolution task.

Problem definition will usually be preceded by a previous stage of unrest, indecision, anxiety, or bewilderment, and a student may make numerous false starts before he begins to identify the conflict on which the problem is based. Although the learning situation starts with the diagnostic phase, the diagnosis does not proceed in a vacuum; the student brings a variety of concepts and skills to bear on the immediate task of identifying the problem. Pre-tests, completion of prerequisite courses or modules, the ability and age of the student, and prior experience are among the factors which may establish the student's initial capabilities. The development of the student and of the learning task must be carefully thought out so that the student does not reduce his problem to meaningless sophistication. The student should apply his knowledge and skill to produce a tentative definition of the problem in the pre-focus stage of unrest.

The diagnostic phase will involve techniques of observation, classification, measurement, analysis, synthesis, and an awareness of essential questions and answers related to the problem. It will entail also identification of expected behavior, present behavior, inferring, valuing, ordering, and predicting for establishing criteria for the resolution of the problem. Initially, the criteria may be roughly articulated, but when they are identified they may be modified and expanded as the student works through the problem resolution task. At the point of tentative identification, the student has progressed through enough of the diagnostic phase to proceed to the input phase of the model.

Having established criteria for resolution of the problem, the student enters the input phase with the idea that he may have to add more criteria, adjust his criteria, or even redefine the problem, but he is on his way to a clear picture of what he is doing, is immersed in his task, and can approach the input stage with purpose and self-imposed direction.

Phase II: Input (Resource Utilization Phase)

Armed with a hypothesis for a problem and criteria for resolution, the student approaches this phase in search of feedback relating to the appropriateness of his perception of the problem and his criteria for its resolution. He will modify his statement and criteria on the basis of this feedback.

Of most significance, however, is the student's search for information and skill development which will enable him to progress to the utilizer phase of the model. The input phase should specifically develop the student's ability to use resources in constructing learning experiences and/or teaching techniques related to the problem. In this phase the student should be guided to appropriate materials or experiences by his professor, or he may involve himself in such traditional approaches to learning as lectures, discussions, readings, and experiential activities. The learning experiences in this phase are not necessarily prescribed but may come to the student as he engages in particular aspects of his problem. However, individually prescribed instruction may be utilized in the event that redirection to this phase is necessary for such reasons as a lack of conceptual understanding of curriculum content to be taught to children.

As a result of this phase the student should: (a) develop an awareness of and competence in selection and use of materials to facilitate achievement of the objectives stated in the problem, (b) develop an understanding of the content necessary to understand the problem adequately, and (c) continue the formulation of appropriate measurement devices which began with the establishment of criteria in Phase I. Particular emphasis in this phase is placed on detailed analysis of concepts and skills in terms of normative behaviors at particular ability and maturational levels.

Phase III: Synthesis (Resource Utilization Phase)

In this phase, originality, innovation, and creativity result in the formulation of approaches to the resolution based on elements which have been discovered in the first two phases of the model. The result of this synthesis should be the development of a finalized approach to problem resolution. This might range from the preparation of an outline for a paper to the development of a lesson plan or an entire unit, based on the problem statement and criteria established in the previous phases of the model. This approach in particular must be checked against criteria for selection of methods or activities, both in terms of the problem and the persons involved. Here the selection of abstractions (theories, principles, ideas, methods) are prepared for application. In a broad sense, this phase represents the final outline of a proposed resolution for the problem immediately before it is implemented.

While it may be assumed that the result of this synthesis would direct the student in his teaching behavior to lead the pupil to Phase I of a sub-set problem-resolution model, it should be noted that circumstances may dictate particular emphasis on a specific phase of the sub-set model. For example, if the major model had indicated that a group of pupils were particularly weak in a skill area, the input phase of the sub-set model might be emphasized in the problem resolution. However, this input might conceivably be developed as a problem-solving resolution in itself.

Phase IV: Output (Competencies Phase)

The output phase may be viewed as an application of all the previous phases; it is the "happening" or "picture taking" phase. Here, the synthesis from Phase III is applied in a teaching or non-teaching situation. In this phase a professor may evaluate a paper, students may discuss and evaluate a report, or data may be recorded by observers through the application of instrumentation to the problem-resolution situation.

The evaluation of output, in terms of the criteria for evaluation developed in Phase I, may lead to a re-examination of any of the four phases of the model. If, for example, a student shows inadequate conceptual understanding of the curriculum content taught to children, he would be directed to the area of resource utilization in Phase II.

If the synthesis results in the application of a problem-resolution approach in dealing with pupils, the output phase of the model would become a sub-set following the procedures of the major model, with pupils acting out the same four phases the student has experienced. Such a procedure would direct specific skills, such as pupil-teacher planning in Phase I. If the "discovery" approach were to be utilized, the student would then become particularly responsible for the development of the resource-utilization phase.

The circular and unified aspect of the model comes into focus as a result of the output phase. The actual output, being evaluated in terms of the criteria already established, may result in either successful or unsuccessful resolution of the problem. These results immediately suggest alternative courses of action. Successful resolution would imply coherence and validity to the procedures followed in the model, and would suggest that the student is ready to relate his learnings to other problem-resolution situations, perhaps of a more complex nature. Unsuccessful resolution would indicate a need for the student to examine his procedures followed in the model; by so doing he will be exposed to self-analysis and guided to remediation.

Application of the Model

An example is now in order of how the problem resolution model will look when applied to the instructional modules of this component. In Module CM-4, Behavioral Statement of Objectives, the first instructional activity is a pre-test to determine the degree to which the individual needs instruction in writing behavioral objectives into lesson plans. The pre-test constitutes a source of data for the diagnostic phase of the student's problem-resolution cycle. Another source of data for helping the student to identify the problem of learning to make behavioral statements of objectives, is the preceding Module CM-3. This module is concerned with showing the student that teaching results in observable behavior on the part of the pupil.

In the seminar (the second activity of Module CM-4) the students are given the opportunity to develop their views on the connection between teaching and observable pupil behavior, and to refine a statement on the problem of learning to state objectives behaviorally. Also during the seminar activity, the student is introduced to the materials that he will use in developing the skill of writing behavioral objectives. In addition, he is given problem packages that require the student to do such tasks as:

1. Differentiate between statements of observable and inferential behaviors.
2. Translate conceptual objectives into behavioral terms.
3. Rephrase in correct terms poorly stated behavioral objectives.

This portion of the module would represent the input phase of the problem-resolution cycle.

Next, the students work individually on their problem materials. During this time they may have access to staff who will give them additional data if needed. It is during this period of individual work that all or most of the synthesis and output phases of the problem-resolution model are accomplished.

The fourth activity consists of another seminar. During this seminar the students and instructor will re-examine the entire rationale behind the use of behavioral objectives, and will explore the difficulties and shortcomings inherent in this approach to teaching. This activity may constitute part of the output phase of problem-resolution in that it may require the student to further synthesize his understandings of behavioral objectives. It also constitutes the connective activity between the output and diagnostic phases of the model in that it leads students to refine criteria for the structuring and use of behavioral objectives.

It is possible that some of the students will, after refining their criteria for structuring behavioral objectives, see the need for further work on this process. These students may proceed to the fifth activity of the module, the remedial activity. In this case they are returning to the diagnostic phase of the problem-resolution model.

Of course, as the students proceed from one activity to the next during this module, they may engage in the reverse connective processes shown on the problem-resolution diagram. For example, while working individually on his problem package materials, a student might see the need for more information and return to the input phase of the cycle by seeking help from the instructor.

Summary

The output represents the final product or manifestation of a problem-resolution which, if successful, indicates to the student that he has proceeded through the learning task in a meaningful way, and should provide the student with direction as to where he may have failed. Resolution, not solution, is the final outcome of a successful learning task, and the student leaves it with the ability to apply similar resolution procedures to new tasks, or with the understanding that the resolution, although successful, has enabled him to identify a new and possibly even more important set of problems to be diagnosed and resolved. At its best, problem-resolution becomes an on-going series of task engagements and refinements which have the distinct advantage of keeping the student and the pupil immersed in their learning situations. This task immersion represents a most crucial element in meaningful learning. Burton and Brueckner state it another way:

> "To comprehend and accept a principle through the study of printed materials is not at all the same as to achieve that principle through the study of actual realistic problems and by undergoing actual realistic experiences in the course of which the principle emerges." (22:519)

The problem-resolution approach accommodates and sustains this type of learning. This problem-resolution model will, therefore, represent the basic methodological approach that will be used in all the instructional modules of the Methods and Curriculum Component. It will also be the basis for all teaching methods taught to the students to facilitate their work with children.

Curricular Areas to be Covered

One of the most important aspects of the Curriculum and Methods Component is that it will be taught within the context of actual educational problems being faced by teachers and children in the school situation. This approach is thought to be important since a major weakness in many existing teacher preparation programs has been the lack of motivation on the part of students.

The lack of motivation has evidently stemmed from the fact that most of the learning experiences to which the students have been exposed, both in the college classroom and in the elementary practice situation, have been largely hypothetical or in preparation for the time when the student was really going to teach. Even the term "practice teaching" is evidence of this situation. Students have learned to make plans for lessons that never were to be taught, test for units that never were to be used, grouping arrangements for classes that did not exist. They have been assigned to observe pupils for no identifiable purpose and to teach lessons covering skills and concepts already mastered by the pupils involved. As a result, student have tended to ignore or forget things taught in their training, and then, during their first year of actual teaching, often wished they had "paid closer attention when we covered that in class."

If large numbers of students are to function in a way that will make them useful in working on real educational problems, they must walk into each working situation with a specific set of skills and related information that can be applied regardless of the curricular area in which they will be working. The elementary curriculum is, essentially, an integrated one, and the rigid boundaries between its various disciplines are frequently ill-defined at the operational level. For example, a lesson in social studies may involve a good deal of reading; a child with a reading problem may be in need of some instruction in speaking and listening, or a lesson in science may very well hinge on one or more mathematical concepts.

In order, then, to make the student more effective in his practical work with pupils and thus provide him with motivation that might otherwise be lacking, the methods for teaching the five major areas of curricula will be taught concurrently with each other throughout the program. For the sake of organizational convenience, the teaching competencies of each area of the curricula are listed separately in Appendix A. It will be noted, however, that the competencies are grouped under process headings that are the same for each subject. It is the process headings that will appear in the descriptions of the instructional modules that follow the rationale. When the process heading "Construction of Teacher-Made Diagnostic Devices" appears in a module description, it may be assumed that the student is able to carry out this activity in any one of the five subject areas of the elementary curriculum.

The first of the subject areas is the language arts. This area has been subdivided into eight sections because of the fairly highly organized nature of the subject and because of the specialized nature of the teaching materials used. The eight sections are:

1. Speaking
2. Listening
3. Usage and Grammar
4. Vocabulary
5. Creative Language Expression
6. Spelling
7. Handwriting
8. Writing (Composition)

Reading, although generally thought of as one of the language arts, has been listed as a separate subject in the present component. The basic reasons for this are the specialized approach commonly used in teaching reading at the elementary level and past experience with the inadequacy of preparation for teaching reading on the part of students who have been exposed to this subject only in a language arts course.

Reading is subdivided into the following four sections:

1. Visual-auditory perception and visual-motor skills.
2. Developmental reading.
3. Reading study skills.
4. Children's literature.

The third subject, social studies, has been subdivided into the following three sections:

1. Locating, organizing and using information.
2. Value examination.
3. Problem-solving.

This system of classification is used because it is based on processes used in dealing with social problems, and is concomitant with the present component's concern with problem resolution in the teaching-learning process.

Science, the fourth subject, has been classified by eight processes used in dealing with scientific problems:

1. Observing.
2. Using space-time relationships.
3. Using numbers.
4. Measuring.
5. Classifying.
6. Communicating.
7. Predicting.
8. Inferring.

This system of classification is again in keeping with the component's orientation toward problem-resolution.

The fifth subject is mathematics. It has been subdivided into ten process sections:

1. Selection of information relevant to solution of problem.
2. Use of a variety of algorisms in the four basic operations.
3. Application of the four basic operations in measurement, geometry, algebra, percent, ratio, proportion, coordinates and graphing, statistics, relations and functions, and logic in problem-solving.
4. Application of interrelated concepts in thinking.
5. Making inferences about numbers.
6. Using intuition.
7. Application of concepts of base and place.
8. Using sets.
9. Using equivalence relationships.
10. Using laboratory methods in creative problem-solving.

The teaching headings under which the competencies of each of the foregoing subjects have been grouped are:

1. Classification of pupil subject-related behavior.
2. Behavioral statement of objectives.
3. Construction and use of teacher-made pre and post-teaching devices.
4. Selection, use and interpretation of standardized tests.
5. Selection, construction and use of teaching materials.
6. Selection and organization of activities.
7. Lesson planning.
8. Unit planning.
9. Curriculum planning.

These teaching processes constitute the bulk of the instructional modules of the present component.

Organization of the Component

The instructional modules for the Curriculum and Methods Component have, for the sake of convenience, been arranged in five groups according to the problem areas of teaching with which they are concerned. The areas are as follows:

1. Curriculum content. This group is composed of six modules (CM-1.1 - CM-1.6) covering basic curriculum content in English, science, mathematics, and the social sciences. This content is handled by self-instruction from programmed sources.

2. Teacher description of school events. This group (modules CM-2 - CM-5) is composed of modules dealing with systems of describing pupil and teacher behavior relating specifically to curriculum. Modules in this group will coordinate strongly with the Child Development and Teaching Theory and Practice Components, and are essential for getting the student ready to begin tutoring public school children.

3. Beginning teaching phase. This group, (modules CM-6 - CM-10) is composed of five modules dealing with basic skills for the diagnosis of children's learning and the teaching of specific objectives to individuals and groups. This group is directly related to the tutorial and micro-teaching experiences of the students.

4. Advanced teaching phase. This group (modules CM-11 - CM-16) is composed of six modules dealing with skills and concepts in the diagnosis of learning and teaching. The difference between this group and the previous one is in the level of sophistication of the materials and devices used and in the

complexity of the teaching situations involved. While involved in this group of modules, the students will be teaching in school centers.

5. Curriculum planning. This group (Modules CM-17 - CM-21) is composed of five modules and represents that portion of the Methods and Curriculum Component in which the student begins to deal with educational problems of curriculum and methodology at the more theoretical level.

The foregoing groupings of instructional modules have been made according to the areas and sequence of concern for the student learning to teach in a program involving a great deal of practical work in school situations.

In past work with students in teacher preparation, it has been found that students are typically concerned with curriculum subjects so that they tend to ignore problems relating to methods and classroom management until they feel comfortable with the content of their lessons. It is hoped that with the present approach students will begin to perceive curriculum content as something that must be independently acquired by the teacher on a continuing basis.

The second most urgent area of concern to students has tended to be the feeling that what the teacher does with children is largely a matter of intuition or common sense that defies deliberate description. It is hoped that the second module group will give the students a vocabulary with which to describe and classify what he sees happening in the classroom.

The third and fourth module groups deal with the technical substance of the teaching act. Structuring lessons and units and familiarity with teaching materials becomes of utmost concern to the student as he is required to perform planned teaching tasks. Diagnosis is typically very weakly covered in undergraduate preparation, and as a result constitutes one of the most glaring inadequacies of even experienced teachers.

Curriculum planning, the fifth module group, is almost never dealt with at all in teacher preparation programs. The fact, however, that classroom teachers have recently become increasingly involved with curriculum planning suggests an introduction of the competencies required in this field. Construction and modification of curriculum is an area in which the individual teacher now has great potential to act as a change agent in education. The present program is designed to produce such change agents.

MODULE GROUP I: CURRICULUM CONTENT

CM 1.1: Growth and Structure of American English

I. Prerequisites: None.

II Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--to be determined by performance on pre-test. Total time is 6 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to give the student background information on the growth and structure of the English language to the extent that his ability to use curriculum materials based on modern structuring of English will be facilitated. The module is directed to learning the following concepts:

A. Phoneme
B. Morpheme
C. Word
D. Inflectional form
E. Accent
F. Juncture
G. Pitch
H. Sentence pattern
I. Word, phrase, clause or intonation signal

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Define the word "phoneme" and identify phonemes in the context of a written selection.

B. Define the term "word intonation signal" and indicate in the context of a written selection how the meaning of a statement might be changed depending on varying specific word intonation signals.

V. Modular Activity Flow Chart: See Figure 4.2.

Note: Since all modules in this group are programmed instruction and follow the same pattern, all flow charts for modules CM-1.1 through 1.6 are identical.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

    a. Have additional instruction prior to taking this module.
    b. Study all or selected portions of this module.
    c. Proceed to the post-test or following module.

2. Depending upon the results of the pre-test, the student is directed to the appropriate learning program and completes whatever operations are required by the program.

3. Post-test to determine if the student should: (a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

4. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

CM 1.2: Earth Science

I. Prerequisites: None.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--to be determined by student performance on pre-test. Total time is 6 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to give the student background information and skills in concepts pertaining to geology, oceanography, and astronomy that will facilitate his use of curriculum materials in the teaching of earth science. The module is directed to learning the following concept areas:

A. Ocean currents
B. Earth-sun relationships
C. Space-time relationships
D. Gravity-mass relationships
E. Descriptive astronomy
F. Erosion
G. Deposition of sediments
H. Mineral taxonomy
I. Vulcanism

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Describe the geological processes leading to the development of shale.

B. Identify from samples of minerals a piece of shale.

V. Modular Activity Flow Chart: See Figure 4.2.

VI. Description of Modular Activities: Same as Module CM 1.1.

CM 1.3: Physical Science

I. Prerequisites: None.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--to be determined by the performance on the pre-test. Total program time is 7 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to give the student background information and skills in concept areas of physics and chemistry that will facilitate his use of curriculum materials in the teaching of physical science. This module is directed to learning the following concept areas:

A. Magnetism
B. Static electricity
C. Current electricity
D. Heat conduction and loss
E. Light
F. Air and weather
G. Water
H. Kinetic energy
I. Sound
J. Chemical reaction in living and non-living things
K. Simple machines

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Define the phrase, current electricity.

B. Show diagrammatically the theoretical structure of electricity.

C. Construct a parallel circuit out of bell wire, battery, lamps, and knife switch.

V. Modular Activity Flow Chart: See Figure 4.2.

VI. Description of Instructional Activities: Same as Module CM-1.1.

CM-1.4: Biological Science

I. Prerequisites: None.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--to be determined by performance on pre-test. Total time is 5 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to give the student background information and skills in concept areas related to the basic life processes, genetics, conservation, and health that will facilitate his use of curriculum materials in the teaching of the biological sciences. This module is directed to learning the following concepts:

A. Ecology
B. Reproduction
C. Ingestion and assimilation of food
D. Circulation
E. Respiration
F. Conservation of biological resources
G. Transmission of genetic traits
H. Reaction to stimuli
I. Health and safety

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Identify parts of the circulatory systems of selected vertebrates in diagrams, photographs, and dissected animals.

B. Describe the likenesses and differences between the circulatory systems of selected vertebrates.

C. Dissect and prepare for examination selected laboratory animals.

V. Modular Activity Flow Chart: See Figure 4.2.

VI. Description of Instructional Activities: Same as Module CM 1.1.

CM 1.5: Mathematics

I. Prerequisites: None.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--to be determined by performance on pre-test. Total time is 7 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to give students background information and skill in mathematical concept areas that will facilitate his use of curriculum materials in the teaching of mathematics at the elementary level. The concept areas dealt with in this module are:

A. Number and numeral
B. Base and place
C. Properties of arithmetic
D. Four fundamental processes
E. Fractions
F. Positive and negative numbers and zero
G. Sets
H. Systems of numeration
I. Modular arithmetic
J. Measurement
K. Algebra as a generalization of arithmetic
L. Geometric perceptions of physical realities
M. Collection, graphic representation and interpretation of statistical data

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. State a verbal definition of base.

B. Explain how the value of each place is derived.

C. Translate numbers from base ten to base five and vice versa.

V. Modular Activity Flow Chart: See Figure 4.2.

VI. Description of Instructional Activities: Same as for Module CM 1.1.

CM 1.6: Social Sciences

I. Prerequisites: None.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--to be determined by performance on the pre-test. Total time is 26 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to give the students background information in certain concept areas of history and the various social sciences that will facilitate his use of curriculum materials in the teaching of elementary social studies. The major concepts dealt with in this module are:

A. Sovereignty of the nation-state in the community of nations
B. Conflict--Its origin, expression and resolution
C. The industrialization-urbanization syndrome
D. Secularization
E. Compromise and adjustment
F. Comparative advantage
G. Power
H. Morality and choice
I. Scarcity
J. Input and Output
K. Saving
L. The modified market economy
M. Habitat and its significance
N. Culture
O. Institution
P. Social control
Q. Social change
R. Interaction
S. Dignity of man
T. Empathy
U. Loyalty
V. Government by the consent of the governed
W. Freedom and equality
X. Historical method and point of view
Y. The geographical approach
Z. Causation (101)

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Define the term, "conflict".

B. Identify examples of conflict at the interpersonal, intergroup, national and international levels.

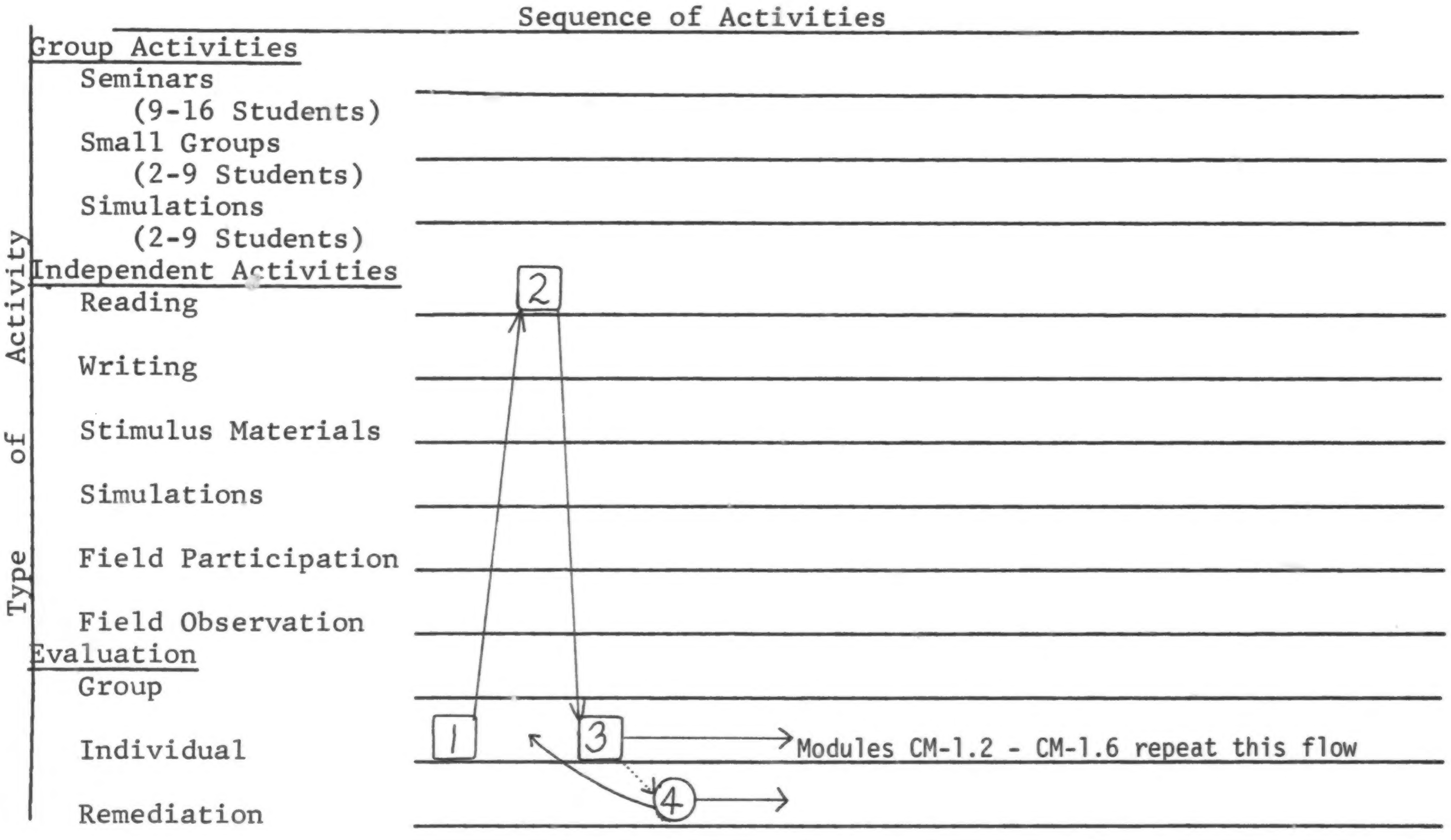
C. Identify and give examples of ways of resolving conflict.

D. When given a set of data on a hypothetical conflict situation, predict the means of resolution that will be used by the people involved.

V. Modular Activity Flow Chart: See Figure 4.2.

VI. Description of Instructional Activities: Same as for Module CM 1.1.

Modular Flow Chart CM-1.1
Figure 4.2


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
Modules CM-1.2 - CM-1.6 repeat this flow

MODULE GROUP 2: TEACHER DESCRIPTION OF SCHOOL EVENTS

CM-2: Extrapolation of Teacher Goals through Observation

I. Prerequisites: Completion of or concurrent with Modules CM 1.1 through 1.6, and PST-1.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--6 hours.
University faculty time--2 hours.
Clinical Professor and Clinical Teacher time--4 hours demonstration and video-taping.

IV. Operational Objectives: The purpose of this module is to help the student see the connection between teaching behavior and the curricular goals of the teacher, that such a connection exists, and that it can be manipulated by the teacher to serve his goals. The general objectives of this module should prepare the student to do the following:

A. Observe the classroom as an interrelated process.

B. Observe the teacher in terms of teaching activity.

C. Record observations.

D. Relate teacher activity to curricular goals.

E. Identify specific curricular goals in the five major subjects.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Write a description of specific teaching actions observed during a demonstration lesson in mathematics, identifying the teacher's actions as:

1. Conducting a discussion in which the children tell what they already know about linear measurement.

2. Presenting the pupils with the task of measuring certain objects, the dimensions of which come out evenly in inches.

3. Presenting pupils with the task of measuring objects, the dimensions of which come out to half inches.

4. Presenting pupils with the task of measuring objects, the dimensions of which come out to quarter inches.

5. Asking questions that lead the pupils to generalize their knowledge about the values of inch, half inch, and quarter inch marks on the ruler, and to determine the relative value of eighth inch marks.

6. Giving the pupils a set of exercises requiring measurement to the nearest inch, half inch, quarter inch, and eighth inch.

B. Identify the teacher's general objective as enlargement of the pupil's concept of linear measurement.

C. Identify the teacher's specific objective as teaching the pupils to measure objects to the nearest eighth inch.

V. Modular Activity Flow Chart: See Figure 4.3.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. The students will meet in a seminar to discuss the relationships among: (a) curricular goals as stated in the curriculum design, (b) objectives of an individual lesson, and (c) the teacher's behavior.

3. Students will meet in groups of five to observe video tape lessons of two different subjects taught by clinical teachers. The students will analyze each lesson by citing specific teacher behavior. This analysis will be in written form, and will include a general summary which explains the interrelationships which exist between teacher behavior and teacher objectives as a whole.

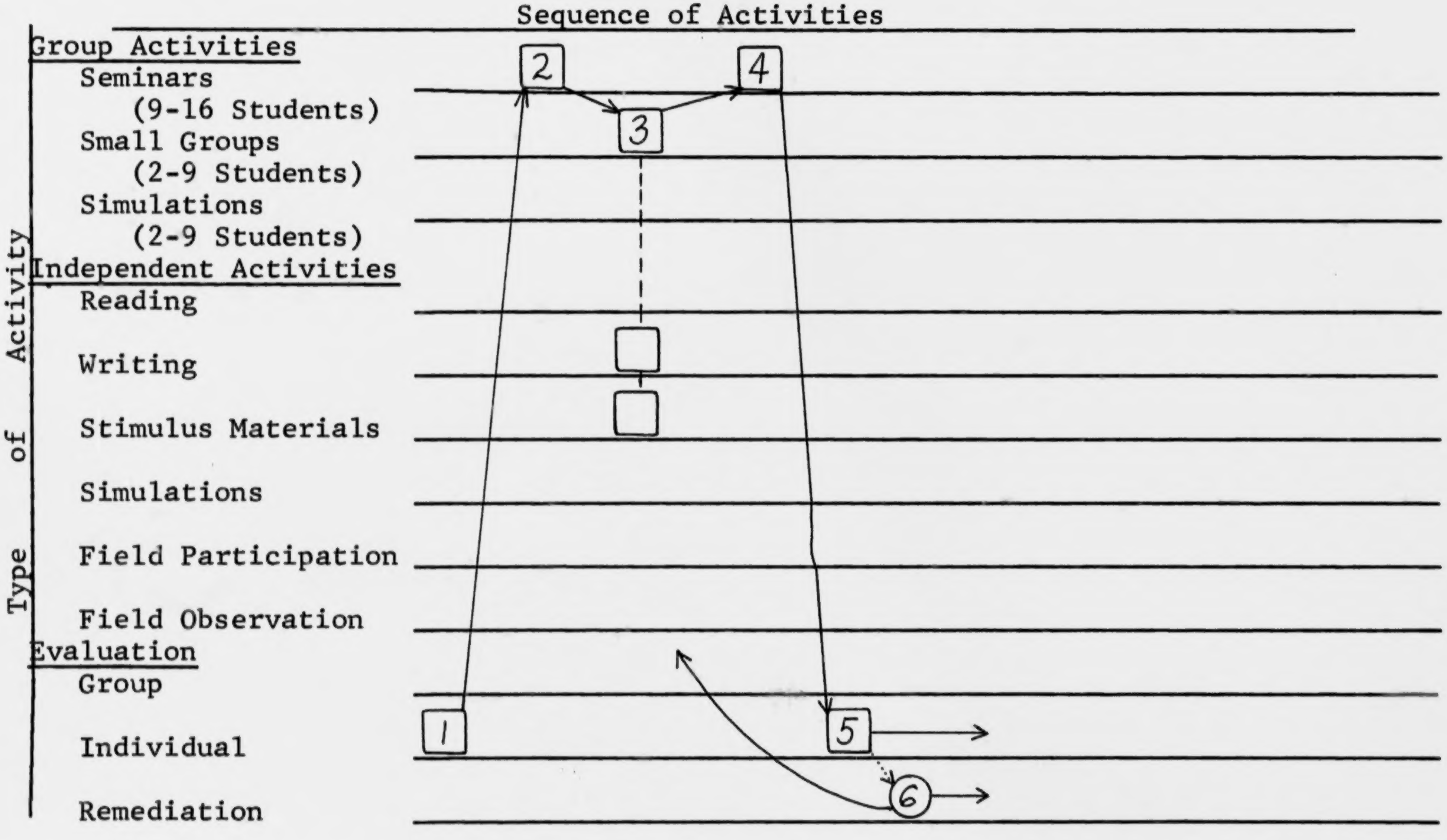
4. The students will reconvene in a seminar to compare their analysis with that of their peers and with statements of teacher intent as expressed in the lesson plans of the teachers whose performances were observed on video-tape. Discussion will focus upon the relationships outlined in the first seminar.

5. Post-test to determine if the student should: (a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

6. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

3

Modular Flow Chart CM-2
Figure 4.3


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

CM 3: Classification of Pupil Subject-Related Behavior

I. Prerequisites: Completion of Module CM-2.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--12 hours.
University faculty time--6 hours.
Clinical Professor and Clinical Teacher time--time spent making demonstration video tapes.

IV. Operational Objectives: The purpose of this module is to provide the student with the vocabulary necessary for him to describe in curricular terms the behavior of children in the classroom. The general objectives of this module should prepare the student to do the following:

A. Record child behavior in terms of the objectives of each of the five subjects.

B. Recognize the objectives of each subject when they are manifest in child behavior.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Identify actions of children that are indicative of concept learning.

B. Identify behaviors indicative of principle learning.

C. Identify problem solving behaviors.

D. Differentiate between behavior reflecting curriculum and that directed at fulfilling needs other than curricular.

V. Modular Activity Flow Chart: See Figure 4.4.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students will meet in a seminar to discuss the relationships which exist among general lesson objectives, specific behavioral objectives of a lesson, and pupil behavior. Curricular terminology used to define pupil behavior at different levels

of abstraction will be introduced and used to describe the relationships. (Resource material such as Hayakawa's Language in Thought and Action may be used in this phase.)

3. Students will convene in small groups to observe video tapes of lessons being taught by clinical teachers in two different subjects. An analysis form listing the pertinent curricular terminology such as: concept, principle and skill, will be given to the students. Pupil behavior indicative of a particular level of learning will be recorded under the appropriate heading.

4. Students will reconvene in a seminar in order to exchange the results of their analysis. The discussion will focus upon the identification of the various levels of learning encountered in the video tape and the differentiation between pupil behavior that demonstrates achievement of a particular learning level and pupil behavior that does not.

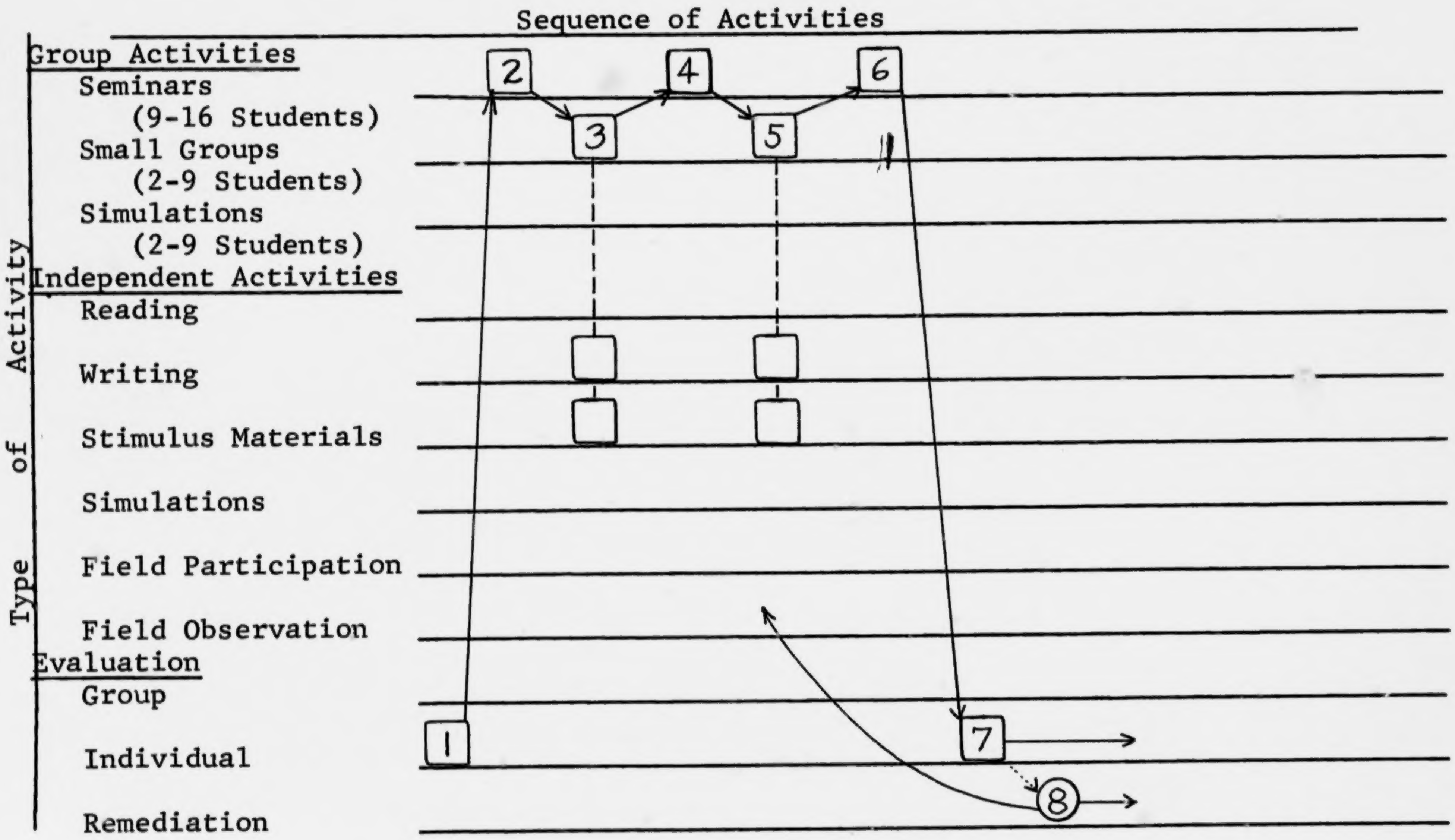
5. Students will reassemble in small groups in order to view a second group of two video taped lessons in two subject areas. The process and format of the analysis will be the same as that followed in the first video tape session in this module.

6. The students will reconvene for a third seminar meeting. Discussion will focus upon the inter-relationships which exist among the various levels of learning and the inter-relationships between these various levels and the behavioral objectives of each lesson.

7. Post-test to determine if the student should: (a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

8. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CM-3
Figure 4.4


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7
8

CM-4: Behavioral Statement of Objectives

I. Prerequisites: Completion of Module CM-3.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--6 hours.
University faculty time--2 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to provide the student with the skills of translating generally stated goals into pupil behavioral terms. The general objectives of this module should prepare the student to do the following:

A. Learn the difference between statements that serve as evidence that learning has taken place and statements of behavior from which learning can only be inferred.

B. Learn to write objectives that describe observable learning, and objectives that describe behavior from which learning can only be inferred.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Translate a set of conceptual and principle objectives for a lesson on social studies into behavioral objectives.

B. Select from a list of behavioral objectives for a unit in science those that are directly indicative of learning and those that are inferential of learning.

C. Identify in a list of behavioral objectives in English those that are phrased in terms of observable behavior and those that are phrased in terms of unobservable behavior, i.e., "to understand", "to appreciate", "to feel empathy for", etc. and rewrite the objectives in the latter category in such a way that they could be inferential statements of the unobservable behavior.

V. Modular Activity Flow Chart: See Figure 4.5.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.

    b. Study all or selected portions of this module.
    c. Proceed to the post-test or following module.

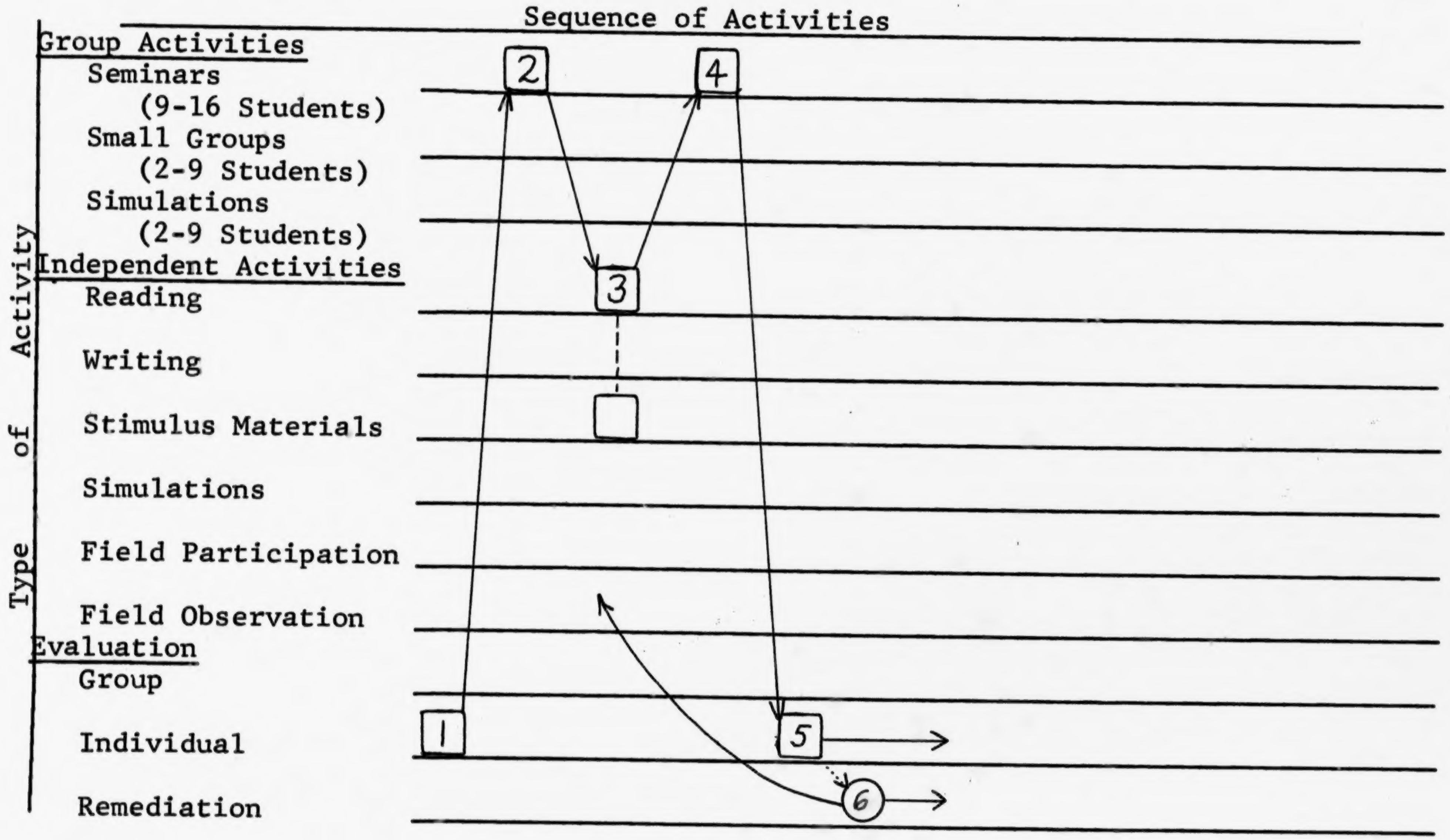
2. The students will meet in seminars to discuss and identify the three major elements in the preparation of behavioral statements of objectives: (a) the behavior exhibited by the pupil, (b) the intermediate and terminal behavior to be exhibited by this pupil to demonstrate his achievement of this objective, and (c) the criterion by which the intermediate or terminal behavior is evaluated. (Resource material such as Mager's Preparing Instructional Objectives and Gronlund's Measurement and Evaluation in Teaching may be used in this phase.)
3. The students will work independently on problem packets consisting of problems regarding the identification of various objectives in the five curricular areas. The translation of these objectives to terminal behavior specifications, and the definition of the criterion of minimal performance for each objective is one of the tasks that is provided for in the problem packet.

4. The students will reconvene in seminar groups in order to analyze and evaluate the results of their work and to discuss the rationale behind the use of behavioral objectives. The analysis and evaluation will be interpreted in light of the major elements introduced in the first seminar of this module.

5. The university professor would then examine the problems completed by the students and determine if a student should repeat aspects of the module or proceed on to the next module.

6. If remedial work is indicated the nature of such work will be determined in a conference between the student and the professor.

Modular Flow Chart CM-4
Figure 4.5


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

CM-5: Interpretation of Standardized Achievement Test Results

I. Prerequisites: Completion of Module CM-4.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--5 hours.
University faculty time--2 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to provide the student with a basic understanding of the interpretation of scores on the various widely-used standardized achievement tests in the five curricular fields. The general objectives of this module should prepare the student to do the following:

A. Learn the names and sources of the standardized tests most commonly encountered in public schools--especially those used in the schools in which field experience centers are located.

B. Become familiar with the format of the tests and the nature of the items therein.

C. Learn the terms in which the test scores are stated and the relation of these scores to the concepts of norm, standard error of measurement, central tendency, and dispersion.

D. Be able to identify for the particular subject elements measured and not measured directly by the test.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Name and tell the publishers of the reading readiness tests used in the schools in which he will be working with the teaching teams.

B. Identify the six skill areas relating to social studies that are tested by the Iowa Tests of Basic Skills.

C. Compare abilities measured and scoring system used by the Lee-Clark Reading Test-First Reader, with abilities measured and scoring system used by the Gates Primary Reading Test.

V. Modular Activity Flow Chart: See Figure 4.6.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students will meet in seminars in order to define the terminology encountered in standardized tests. Such terms as raw score, derived scores, grade norms, age norms, percentile norms, and reliability will be defined. Specimen sets of widely-used standardized achievement and standardized aptitude tests will be used in defining various terms.

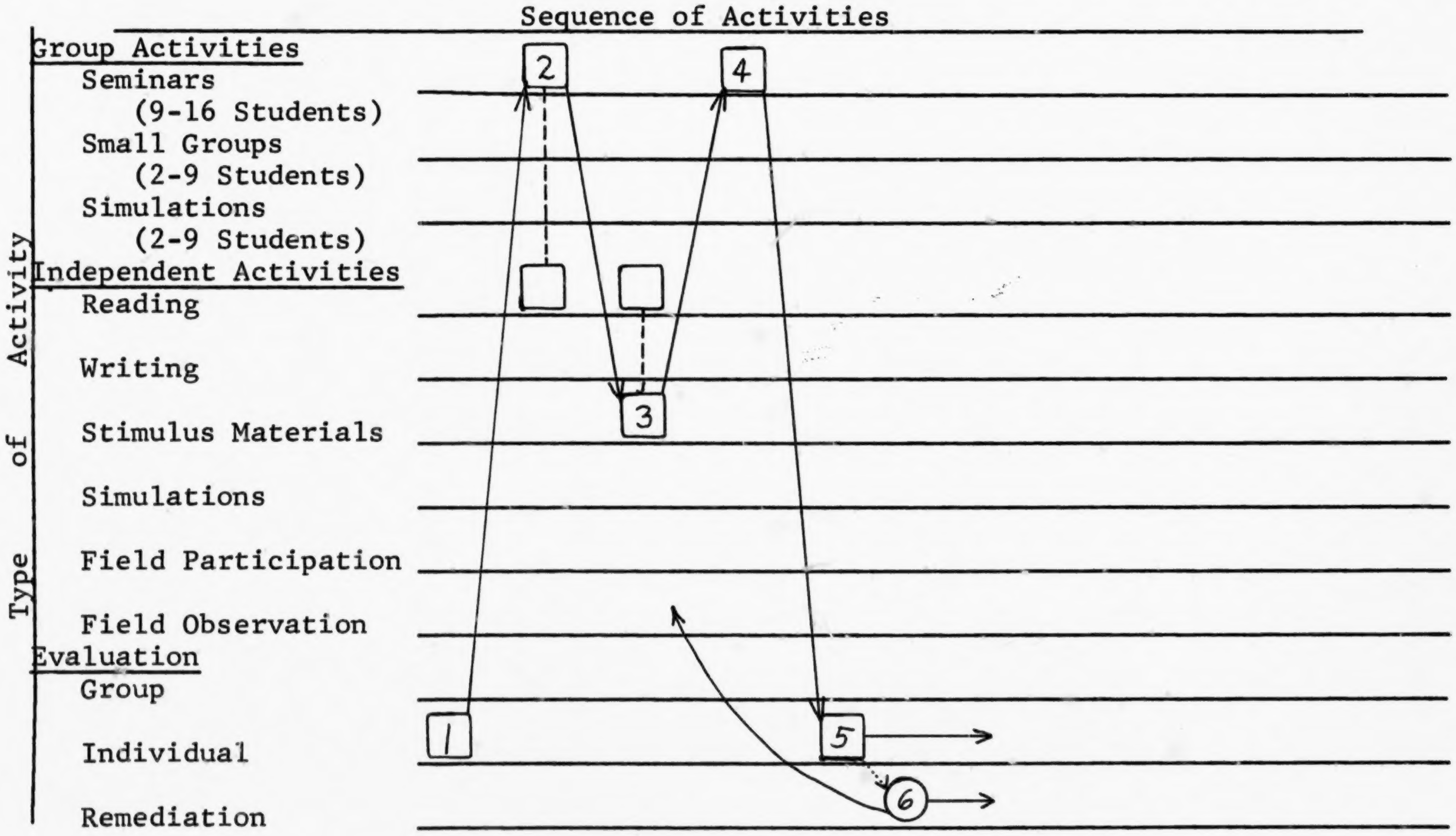
3. The student would work individually with a problem packet consisting of four different simulated pupil completed tests, test manuals for each of the tests, a sheet of fictitious raw scores representing class performance on each of the four tests, and an evaluation booklet to record the student's critique of each test. (Resource material such as Davis' *Educational Measurements and Their Interpretation* and Lyman's *Test Scores and What They Mean* would be available through the Instructional Materials Center.)

4. Students would meet in seminars to compare their test results and evaluations. The discussion would focus upon standard procedures to be followed in interpreting test scores, such as interpreting results in terms of the standard error of measurement of the test, interpreting results in light of other pupil data and verifying results whenever possible by other means.

5. Post-test to determine if the student should: (a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

6. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CM-5
Figure 4.6


Sequence of Activities
Type of Activity
Group Activities
Seminars (9-16 Students)
Small Groups (2-9 Students)
Simulations (2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

MODULE GROUP 3: BEGINNING TEACHING PHASE

CM-6: Construction and Use of Teacher-Made Pre and Post-Teaching Diagnostic Devices

I. Prerequisites: Completion of Module CM-4.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--14 hours.
University faculty time--3 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to acquaint the student with various approaches he may take to assess abilities of pupils of the sort with whom he will be working in tutorial and micro-teaching situations. The general objectives of this module should prepare the student to do the following:

A. Develop the habit of assessing pupil abilities before and after working with the pupil.

B. Develop the habit of sharing with the pupil his record of progress or lack of progress as the instruction progresses.

C. Be able to subdivide objectives into logical sequences that can be tested by the teacher.

D. Be able to devise systems of assessing pupil achievement.

E. Be able to devise systems of keeping track of the pupil's progress.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Construct an oral reading inventory to use in arriving at the general reading level of a third grader for whom no records are immediately available.

B. Construct a set of tasks to determine the exact phonic elements with which a poor speller is having difficulty at the fifth grade level.

C. Construct a set of tasks to determine the extent to which negative attitudes may be influencing a third grader's learning of cursive writing.

D. Help fourth grade children construct a checklist whereby they can rate their own performance in choral speaking.

V. Modular Activity Flow Chart: See Figure 4.7.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students will meet in seminars to identify, compare, and contrast various types of measurement devices used by classroom teachers. These diagnostic devices may include objective and essay tests, check lists, rating scales, peer appraisal reports, self reports, and anecdotal records. The student will be given problem packets containing an individual and group learning problem for each subject; related pupil data, such as academic, physical, social and mental reports; samples of pupils' work concerned with the problems at hand; and a statement reflecting the pupils' opinion of the problem.

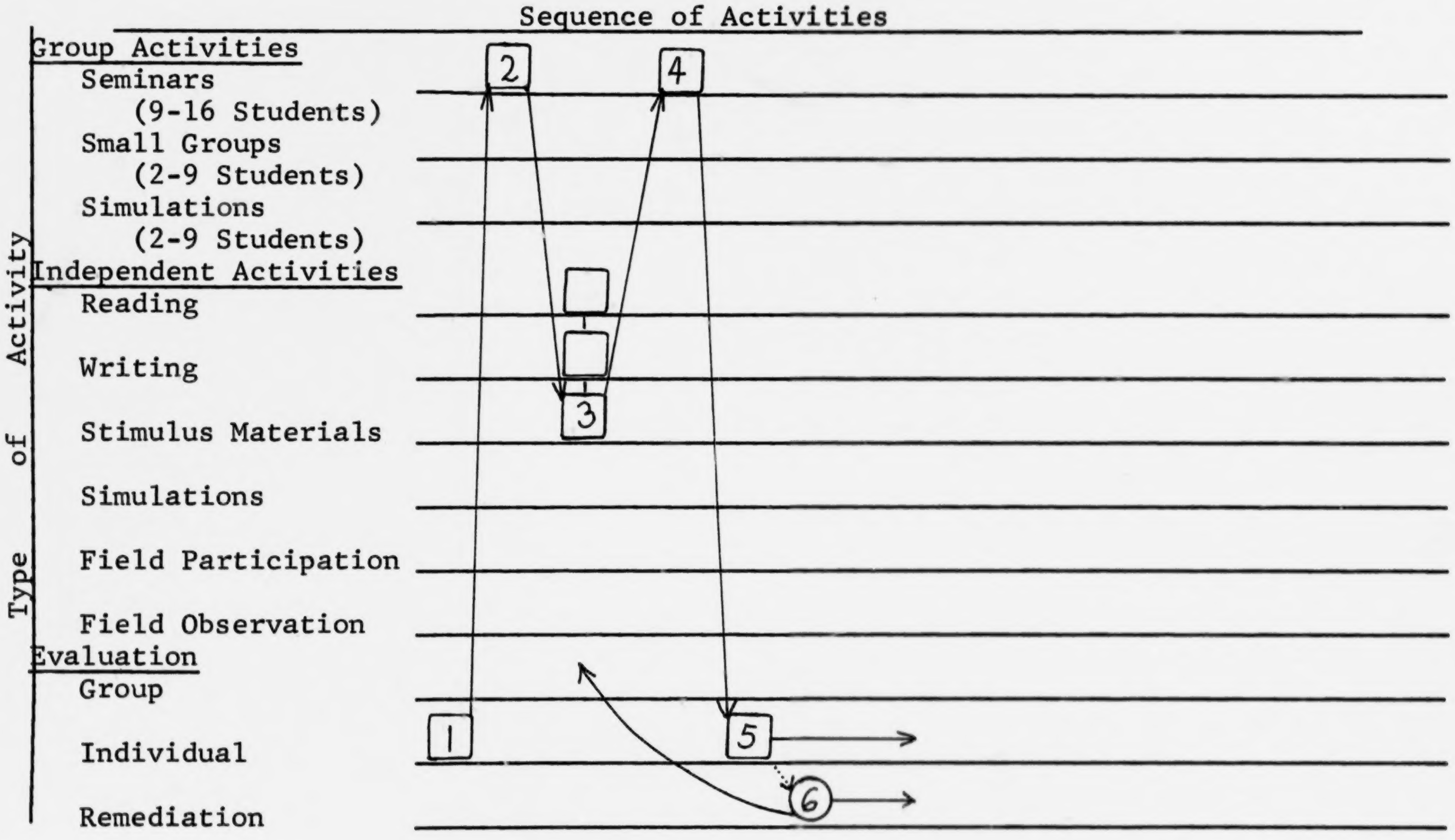
3. Students will work independently to solve the problems posed by each packet. The student will be asked to: restate each problem in terms of behavioral objectives, construct a measurement device and a criterion of acceptable performance in such a way as to be intelligible to the student and the pupils.

4. Students will reconvene in seminars to compare and contrast the different measurement devices used and identify the strengths and weaknesses such as: ease of administration and scoring, associated with each device.

5. Post-test to determine if the student should: (a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

6. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CM-6
Figure 4.7


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

CM-7: Selection and Use of Teaching Materials

I. Prerequisites: Completion of Module CM-5 and CM-6.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--18 hours.
University faculty time--6 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to acquaint the student with the materials available for teaching the various subjects and to give the student ideas as to how these materials can be related to specific objectives. The general objectives of this module should prepare the student to do the following:

A. Become familiar with teacher-made and commercially-prepared teaching materials designed for use by pupils progressing at their own rate.

B. Become familiar with teacher-made and commercially-prepared materials designed for group instruction.

C. Learn to use materials that can be used for art-related activities.

D. Learn to use materials that can be used in construction-related activities.

E. Learn community sources for information including available resource persons.

F. Become familiar with textbook series and make comparisons among them.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Select a set of manipulative materials and demonstrate their use in teaching the concept of place value.

B. Using an overhead projector and a set of map overlay transparencies, demonstrate the inter-relationship of temperature, precipitation, and land use in the Soviet Union.

C. Select and demonstrate the use of individualized figure-ground discrimination tasks for kindergarteners.

V. Modular Activity Flow Chart: See Figure 4.8.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

    a. Have additional instruction prior to taking this module.
    b. Study all or selected portions of this module.
    c. Proceed to the post-test or following module.

2. The students would meet with the instructor for group orientation to the Instructional Materials Center. The use of specific references such as teacher's manuals, film catalogues, and pamphlets describing commercial products, for analyzing the attributes of teaching materials would be discussed.

3. The students would be given five objectives for each of the subject areas, and would work independently to find teaching materials that could be utilized in a learning activity designed to achieve each objective. The student would prepare a written report of his findings. This report would include a statement of his objectives, a listing of the teaching material for each objective, and an analysis of the appropriateness of the teaching material selected.

4. Students would meet in a seminar with their instructor to analyze and evaluate their findings.

5. The students would then meet in small groups again for the purpose of viewing film sequences which present a variety of problems such as selecting materials for: large group instruction, individual instruction, instruction of the disabled, and selecting supplementary reading aids.

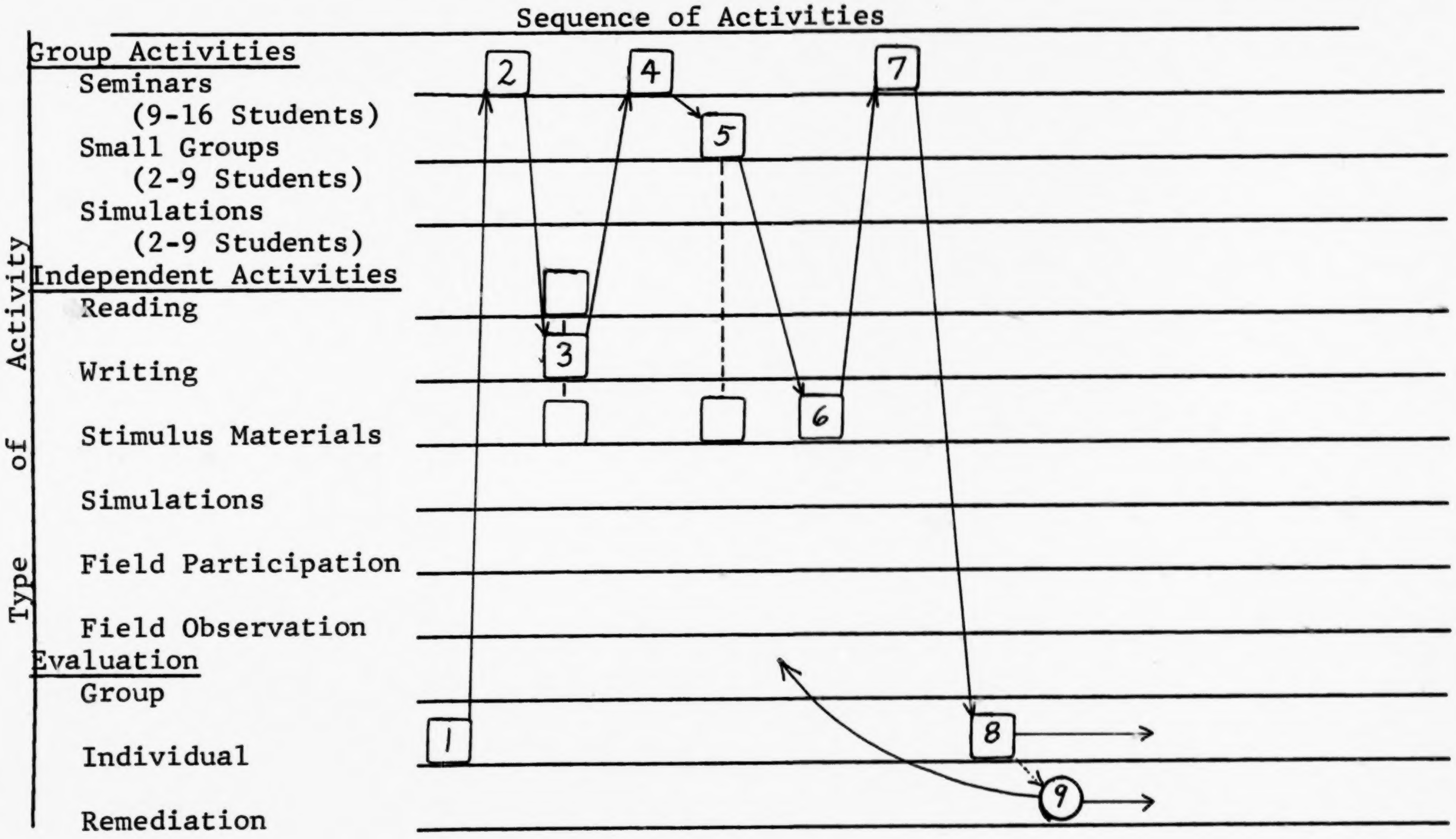
6. Packets containing a series of problems dealing with the selection of materials appropriate to the objectives of each film sequence would be given to the students. The students would independently develop an activity designed to reach each objective. Special emphasis in this activity will be placed upon the kind of teaching material to be used, how it relates to the objective, how it is to be integrated into the activity, and special considerations to be noted such as time.

7. Students will meet in seminars and exchange the results of their investigations. An evaluation of all the student findings will be conducted for the benefit of the total group. The student will be given the opportunity to become familiar with materials he may not have investigated.

8. Post-test to determine if the student shoud: (a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

9. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CM-7
Figure 4.8


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7
8
9

CM-8: Selection and Organization of Teaching Activities

I. Prerequisites: Completion of Module CM-5 and CM-6.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--12 hours.
University faculty time--3 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to familiarize the student with the variety of learning activities available in each subject and to help him learn how to select appropriate activities for pupils in the various subjects. In this module the student should also gain some insight into how the purposes of activities are communicated to the pupils and how the children are organized for carrying out the activities. The general objectives of this module should prepare the student to do the following:

A. Learn to view the activity as the means whereby the pupil becomes involved with the learning process.

B. Learn to match the activity with the objectives of the lesson.

C. Learn to match the activity with the capabilities and interests of the children.

D. Develop the habit of informing the pupils of the connection between the activity and what they are to learn.

E. Develop the ability to provide the necessary amount of structure, organization and explanation for each learning activity to prevent undue confusion during the lesson.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Structure and explain to pupils a problem-solving activity to help third graders learn map locational skills.

B. Structure and explain to pupils a role-playing situation for fifth graders to help them gain empathic insight into the problems of being a minority group member.

C. Organize pupils to carry on a map construction activity taking into account their previous experience with the media of construction, level of development of the concept of scale, previous experience with group work, etc.

V. Modular Activity Flow Chart: See Figure 4.9.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:
   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students would meet in seminars to discuss a suggested criteria for evaluating learning experiences. These criteria may include such elements as: the relationship between activity and objectives, the appropriateness of the activity in regards to the pupil, the resources available, and the provisions made for individual differences.

3. The students would meet in small groups in which they would view film sequences of a variety of learning experiences conducted in a classroom. The students would be asked to list the kinds of activities such as: visual activities, oral activities, listening activities, writing activities, and motor activities, that were performed in each film sequence. While still in small groups, the students would be asked to analyze the relationship between the activities viewed and the suggested criteria developed earlier in the module.

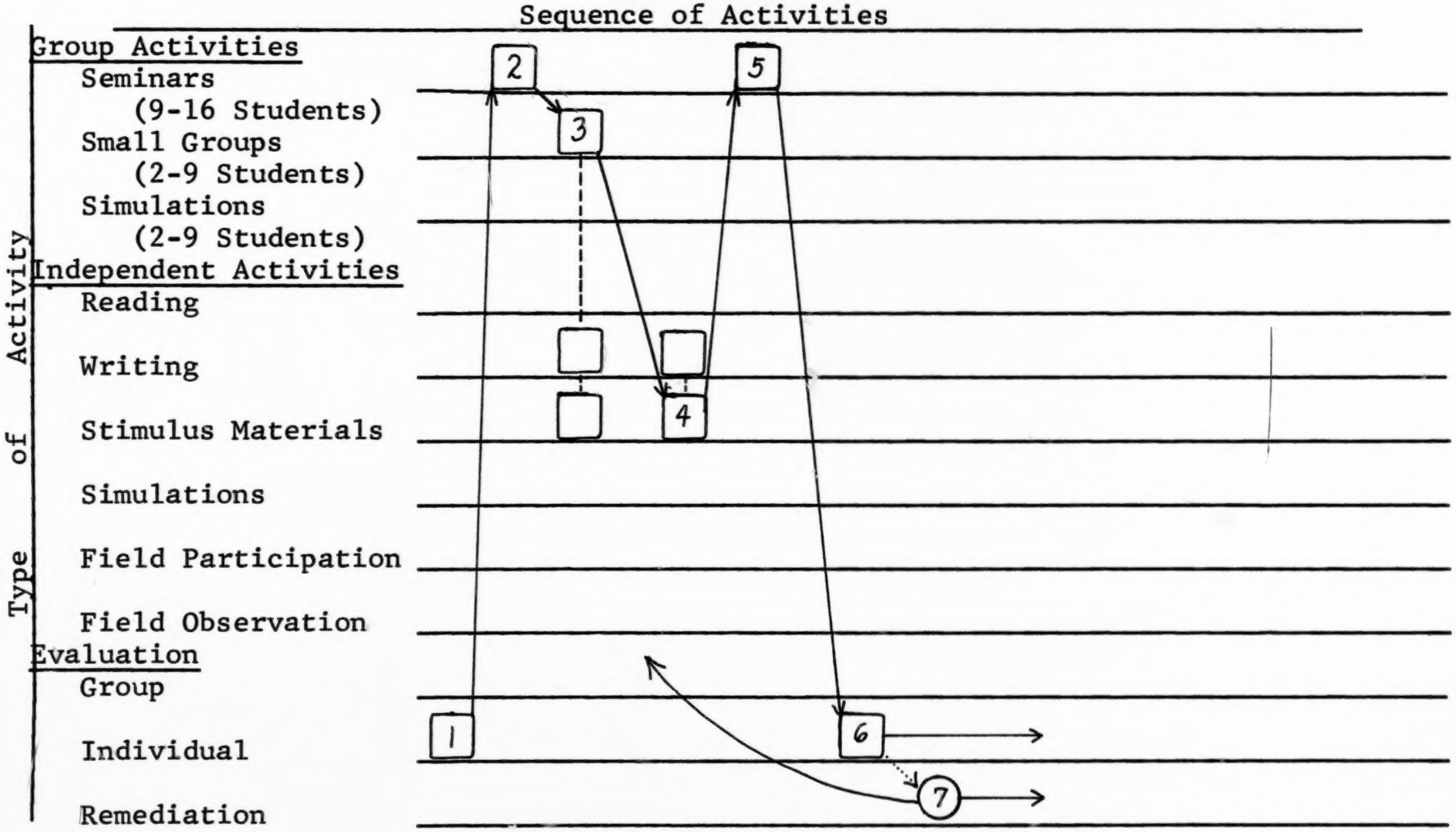
4. Students would then receive problem materials packets related to the films they had observed. On the basis of information received in the packet and what he had seen in the accompanying film, each student would work independently selecting activities to resolve the problems posed, give a rationale for his selection, and work out the explanations he would give the pupils as to the reason for doing the activities, and telling the sort of structure that he would place on the activity assignments.

5. The students would meet in seminars to analyze and critize their resolutions of the problems. The criteria introduced in the first seminar would be used to evaluate each learning activity. The student would continue until the best possible activity for a given situation has been proposed.

6. Post-test to determine if the student should: (a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

7. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CM-8
Figure 4.9


Sequence of Activities
Type of Activity
Group Activities
Seminars (9-16 Students)
Small Groups (2-9 Students)
Simulations (2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7

CM-9: Lesson Planning

I. Prerequisites: Completion of Modules CM-7 and CM-8. Concurrent with tutorial work.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--8 hours.
University faculty time--4 hours.
Clinical Professor and Clinical Teacher time--2 hours.

IV. Operational Objectives: The purpose of this module would be to provide the student with the necessary structure to make effective lesson plans. The general objectives of this module should prepare the student to do the following:

A. Know the components of an effective lesson plan.

B. Know a beginning format that he can follow in lesson planning.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Plan a coherent lesson for an individual session with a tutorial case.

B. Plan a coherent micro-teaching lesson in any one of the common branch subjects.

V. Modular Activity Flow Chart: See Figure 4.10.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:
   - a. Have additional instruction prior to taking this module.
   - b. Study all or selected portions of this module.
   - c. Proceed to the post-test or following module.

2. The student will meet in seminars at which time he will be given problem packets. These problem packets will contain data relating to the elements of planning a lesson such as a general statement of the mission, pertinent pupil data, and a comprehensive list of resource materials. Discussion will then focus upon the specific objectives of the lesson plan, the activities to be used in order to reach these objectives, the resource materials to be utilized, the evaluation procedure to be followed, and how feedback will be used.

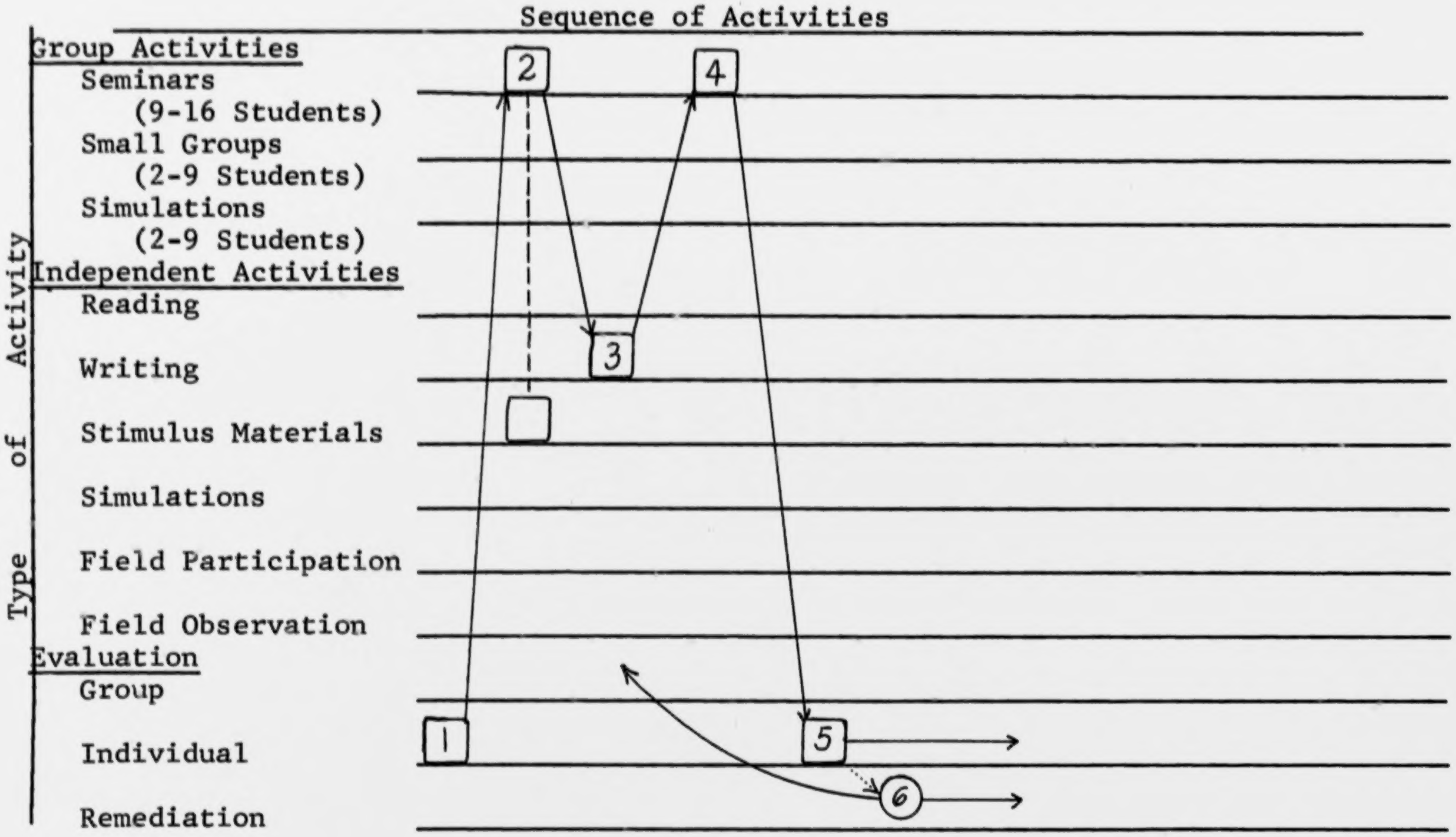
3. With the assistance of the clinical teachers the student will refine the general elements discussed in the seminar in order to produce a specific format and process to be used in planning lessons. A minimum of three lesson plans will be prepared. These lesson plans should be the first lesson plans to be used in the student's tutoring of a public school pupil.

4. Students reconvene in their seminar and analyze the lesson plans in light of the elements presented in the first seminar and in terms of the situational variables at the Tutorial and Micro-Teaching Center.

5. Post-test to determine if the student should: (a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

6. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CM-9
Figure 4.10


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

CM-10: Analysis of Teaching Styles of Self and Others

I. Prerequisites: Completion of Module CM-9. Concurrent with micro-teaching experience in public schools.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--25 hours.
University faculty time--8 hours conducting seminar.
Clinical Professor and Clinical Teacher time--3 hours.

IV. Operational Objectives: The purpose of this module is to give the student a set of techniques that he can use to characterize his own teaching and that of others. The general objectives of this module should prepare the student to do the following:

A. Be able to identify the types of situations that elicit management behavior on his part.

B. Be able to identify the types of situations which elicit various types of interpersonal behavior on his part.

C. Characterize his instructional behavior as to its openness or closedness by analyzing:

1. Student statements and student responses to pupils' statements.

2. Student questions and responses to pupils' questions.

3. Amount and quality of structure placed on activities and assignments.

D. Identify subjects in which he tends to exhibit more closed instructional styles and those in which he tends to exhibit more open styles, and speculate as to the reasons for a variation in style from subject to subject.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Make a list of behaviors that he used in teaching a micro-class of fifth graders in an inner city school.

B. Describe the sorts of things first graders do that are likely to evoke sanctioning behaviors on the part of the teacher.

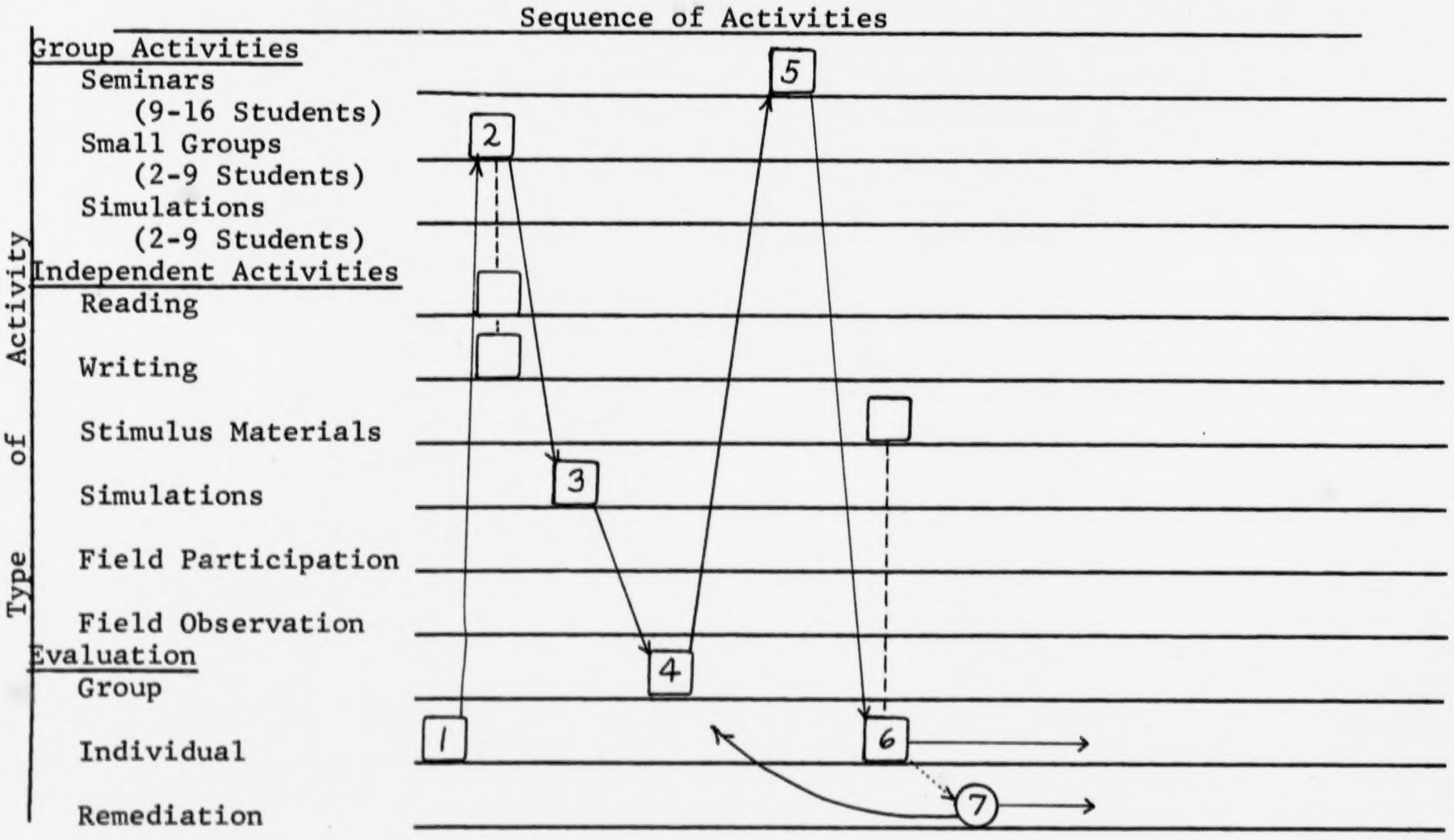
C. Contrast his instructional behavior as to openness or closedness when using highly structured materials in teaching a math lesson as opposed to using ideation techniques in teaching a writing lesson.

V. Modular Activity Flow Chart: See Figure 4.11.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:
   - a. Have additional instruction prior to taking this module.
   - b. Study all or selected portions of this module.
   - c. Proceed to the post-test or following module.
2. Students meet with their clinical teacher to develop and prepare a series of micro-teaching lessons.
3. Each student teaches four video taped micro-lessons in different subjects at the same grade level.
4. The students will meet in pairs to view and analyze the video tapes of themselves and their partner. This analysis will focus upon the interaction of the behavior of the student, the behavior of the pupil, and the situational variables. Different conceptual frameworks will be used to analyze the same act.
5. Students will meet in seminars to present the findings of their small groups for comparison with the outcomes of other groups. Generalized statements regarding interpersonal behavior in the teaching act would then be formulated.
6. The student would then be given a post-test such as observing a video tape of his own teaching that he would analyze in terms of his own behavior in interaction with the pupils. Results of this post-test would determine: (a) whether or not the student should repeat aspects of the module, (b) proceed to another module.
7. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CM-10
Figure 4.11


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7

MODULE GROUP 4: ADVANCED TEACHING PHASE

CM-11: Selection and Organization of Teaching Activities

I. Prerequisites: Completion of Module CM-10. Concurrent with modules CM-12 through CM-16, and teaching experience.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--Learning time is 180 hours, of which about 90 hours will be spent in individual work involved with the preparation of actual teaching lessons in the field experience center.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--30 hours on the part of the clinical professor working with teams of individuals or in special seminars with students.

IV. Operational Objectives: The purpose of this module is to give the student criteria for the selection and organization of learning activities for individuals with special learning problems and for multi-grouping in the classroom. The general objectives of this module should prepare the student to do the following:

A. Select learning activities that can provide maximum learning for individuals in the classroom under the specified conditions of:

1. Pupil readiness and needs.
2. Physical layout of the classroom.
3. Availability of materials.
4. Staff-pupil ratio.

B. Organize these learning activities on the basis of the same four specified conditions.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Select and organize an appropriate activity for 8 pupils in a third grade class ranging in reading grade equivalent from 2.1 to 3.1, all of whom are having difficulty with consonant digraphs.

B. Select and organize the appropriate information for a unit on Indians for 6 pupils in fourth grade who are reading independently at the 2.2 level.

C. Select the appropriate activity in creative story making for four pupils in the first grade who are not yet reading.

D. Select the most appropriate problem solving activity in a unit on air and weather for five sixth graders who are reading independently at the 9.0 level.

E. Select the most appropriate spelling activity for a third grader who exhibits high avoidance behavior during spelling tests.

F. Select the most appropriate activity in social studies for two fifth graders who exhibit acting out behavior during periods of relatively unstructured activity in the classroom.

V. Modular Activity Flow Chart: See Figure 4.12.

VI. Description of Instructional Activities:

1. Evaluation of student performance in this module will be continuous because of the continuous nature of the learning activity throughout the senior professional year, and will be accomplished through the team cycling process. The student first meets with his planning team and determines with the team members what his teaching assignment is to be.

2. The student gathers preliminary data necessary to select and organize the learning activities. Such data will include general information about the pupils, detailed information about the special problems of individual students, the kinds of teaching aids available, and situational constraints. The relationships that exist among the individual pupil, the learning activity, and the objective to be achieved will guide the construction of each lesson plan. The student selects those activities for inclusion in the lesson plan that optimize the achievement of the objectives.

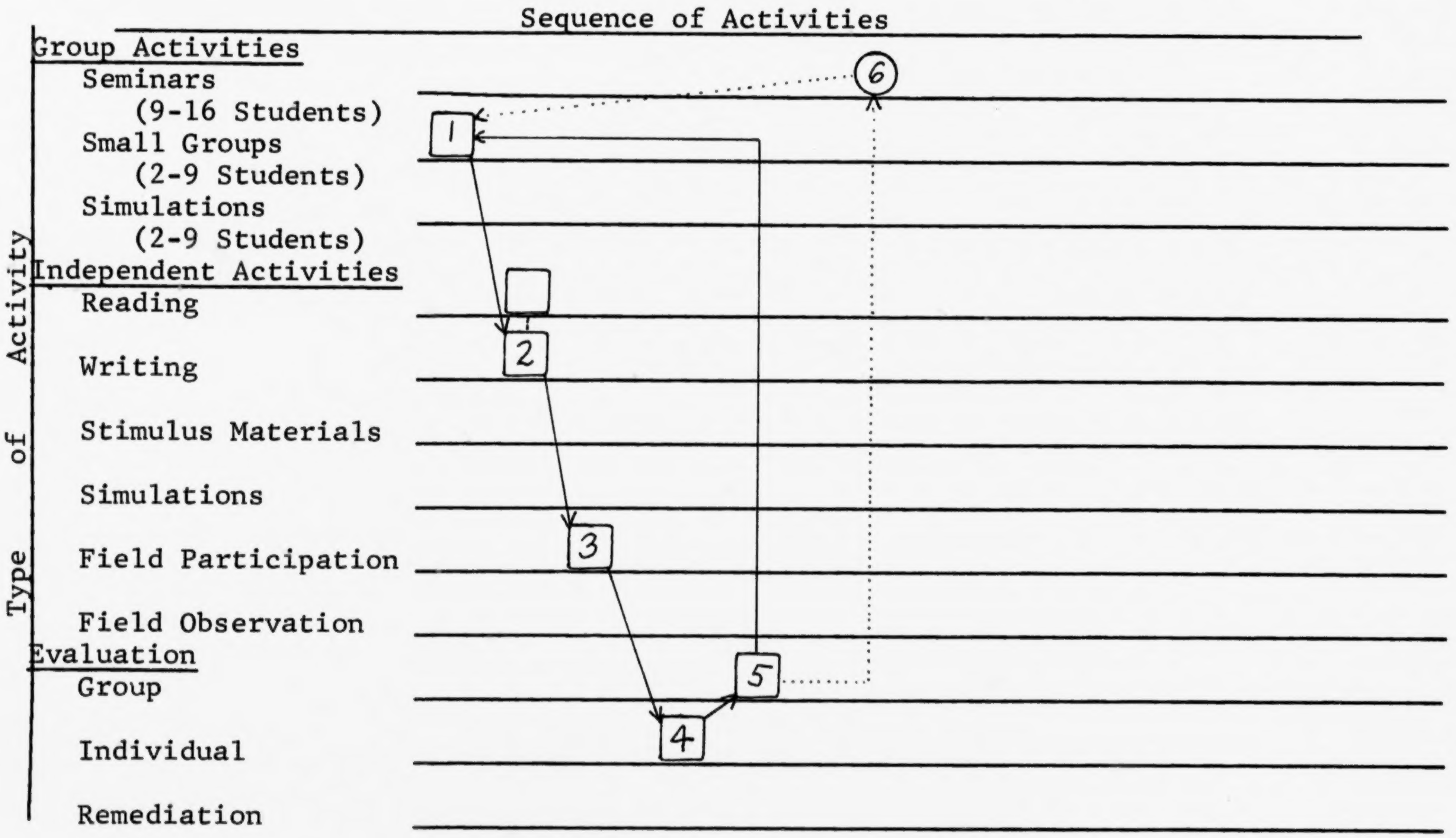
3. The student teaches the lesson. Feedback data specified in the team meeting are gathered.

4. The student independently evaluates the appropriateness of activities, materials, etc. used in the lesson in the light of feedback data.

5. The student meets with his team for cycling. The cycling process provides further feedback concerned with student performance in various phases of the module. During the team meeting, these data are fed back to the students for further analysis and evaluation so that performance in the successive planning of teaching acts can be improved.

6. If the data collected in the team cycling process indicates a need for group instruction on the part of the clinical professor (several students in the teaching center are having similar problems), a small group seminar could be conducted by the clinical professor. The clinical professor could also have an individual conference with a student if he was the only student in the center at that time who had a particular problem with the task.

Modular Flow Chart CM-11
Figure 4.12


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

CM-12: Selection and Use of Teaching Materials

I. Prerequisites: Completion of Module CM-10, simultaneous with modules 11 and 13 through 16.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--90 hours, of which about 30 are independent work, and 60 are work with the teaching teams.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--about 60 hours in team planning and supervision with seminar when needed.

IV. Operational Objectives: The purpose of this module is to give the student criteria for the selection of teaching materials for individuals with special learning problems and for multi-grouping in the classroom. The general objectives of this module should prepare the student to do the following:

A. Select learning materials that provide maximum learning for individuals in the classroom under the specified conditions of:

1. Pupil readiness and needs.

2. Physical layout of the classroom.

3. Availability of materials.

4. Staff-pupil ratio.

B. Make use of the materials under the same four specified conditions.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Select the most appropriate materials for helping a sixth grader operating at grade level in reading, improve his reading ratio.

B. Select the appropriate materials for helping fourth graders discover the effect of pulleys on the lifting of a weight.

C. Select the most appropriate materials for helping four of the least mature kindergarterners improve their eye-hand coordination.

V. Modular Activity Flow Chart: See Figure 4.13.

VI. Description of Instructional Activities:

1. Evaluation of student performance in this module will be continuous because of the continuous nature of the learning activity, and will be accomplished through the team cycling process. The student first meets with his planning team and determines with the other team members what his teaching assignment will be. In this conference the student also receives information regarding pupil needs and abilities.

2. The student independently gathers data necessary for the development of a criteria for selecting instructional materials. The student will be given resource material which shows the relationship between instructional material and pupil needs, pupil maturational level, pupil experience, group composition, accuracy and validity of the material, actual use of the materials, direct experience, and practicality such as cost. The student uses the criteria to select the material he intends to use for the lesson.

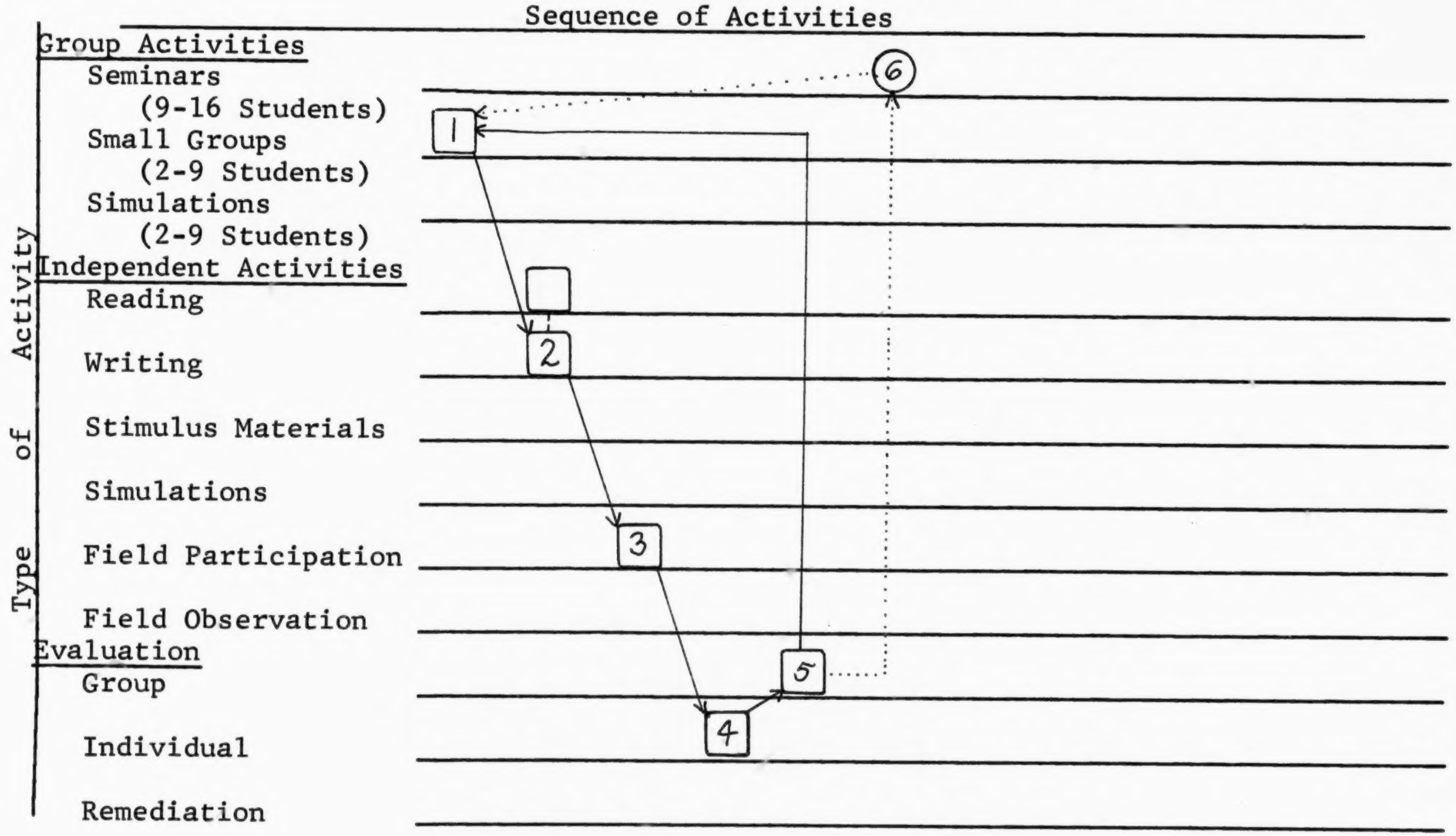
3. The student uses the materials in the learning activities in teaching a lesson. An observer utilizes the criteria developed by the student to analyze his use of selected materials in the light of the learning outcomes.

4. The student evaluates the effectiveness of the lesson using criteria specified in module objectives. Use is made of feedback data gathered by an observer during the lesson.

5. Student meets with his team for cycling. The team meets for purposes of team evaluation of his performance. Data presented by the team are discussed with the student so his performance on the next teaching task can be improved.

6. If the data collected in the team cycling process indicates that several students in the teaching center are having similar problems a small group seminar could be conducted by the clinical professor. An individual conference may be conducted with a clinical professor if only one student is having a particular problem with the task.

Modular Flow Chart CM-12
Figure 4.13


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

CM-13: Selection and Administration of Standardized Achievement Tests

I. Prerequisites: Completion of Module CM-18, simultaneous with Modules CM-11, CM-12, and CM-14 through CM-16. Concurrent with teaching experience.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--10 hours.
University faculty time-0 hours.
Clinical Professor and Clinical Teacher time--6 hours in team planning.

IV. Operational Objectives: The purpose of this module is to enable the students to select, administer, and interpret results of standardized tests in all subjects. The general objectives of this module should prepare the student to do the following:

A. Develop criteria for selecting tests.

B. Learn to administer tests.

C. Learn to interpret intelligently the results of tests.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Pick from a group of reading readiness tests the test that would be most likely to measure accurately the children in a given classroom.

B. Administer the Iowa Tests of Basic Skills.

C. Use the scores of the children in a given classroom on the Work-Study Skills test of the SRA Achievement Series to construct a series of lessons designed to improve information-gathering techniques in a sixth grade.

V. Modular Activity Flow Chart: See Figure 4.14.

VI. Description of Instructional Activities:

1. Evaluation in the module will be continuous and accomplished through the cycling process. The student first meets with his team in order to define specifically the type of information being sought through testing.

2. The student independently prepares a general outline of the types of standardized tests that meet the needs of the testing program. (Reference sources such as Buros' Tests in Print

would be used at this phase.) The student then evaluates selected tests by comparing testing needs and the purposes of the test. (Reference material such as specimen sets, Buros', Mental Measurements Yearbooks and Educational and Psychological Measurement may be consulted in this phase.) The student will prepare a written evaluation of the standardized tests. The evaluation may include the following types of information: Identifying data, general information (such as validity, reliability and norms), practical information (such as ease of scoring) and a general evaluation.

3. The student submits his analysis of tests to his team. The team analyzes and compares the tests in light of the particular needs of the local school situation and a test is chosen.

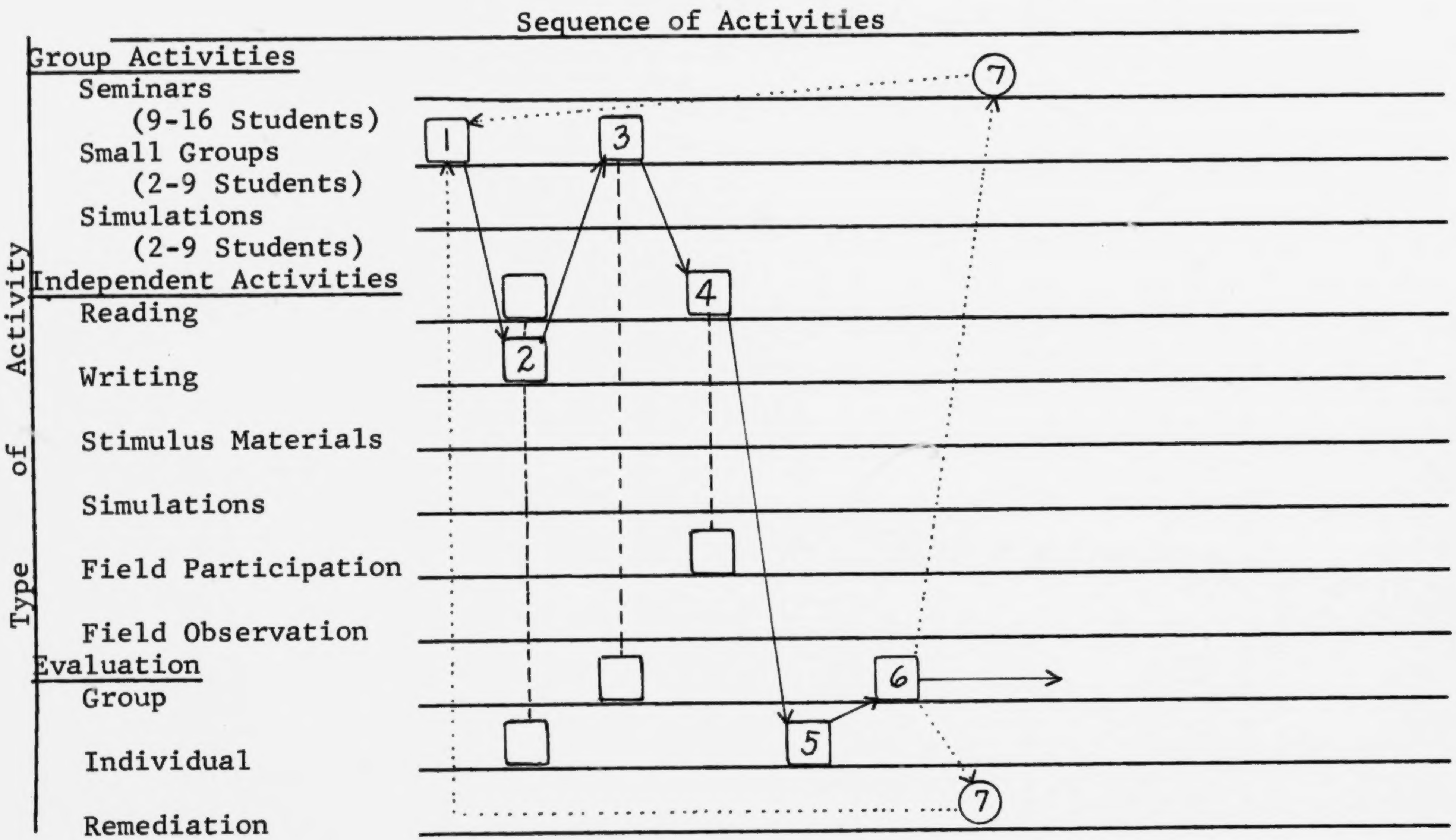
4. The student prepares for the administration of the test by checking the test materials, obtaining a suitable location for testing, studying the test materials, and by practicing administration of the test. The student is then ready to administer the test. Student behavior during administration of the test will be observed, and data regarding his performance will be recorded. These data for example, may be concerned with how well the student motivates the pupils, adheres to the test directions and time, and how well the student records events that may influence the test score of a pupil.

5. The student interprets the results of the test in relation to such general areas as: pupil grouping, individualizing instruction, identifying special needs, evaluating pupil progress, and identifying inputs to other areas of the school program.

6. The student presents his evaluation to the team. The performance of the student at each phase of this module is discussed and evaluated. Immediate feedback is provided so that student performance on this module in the next teaching center can be improved.

7. If student performance in any phase of the module indicates the need for an individual conference, this could be held. If several students were having a similar difficulty, a small group seminar would be scheduled. In this module their activities would be conducted by the clinical professor. Upon completion of the conference or seminar, the student would be re-cycled through appropriate phases of the module.

Modular Flow Chart CM-13
Figure 4.14


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7
7

CM-14: Construction and the use of Teacher-Made Pre and Post Teaching Diagnostic Devices

I. Prerequisites: Completion of Module CM-10, simultaneous with Modules CM-11 through CM-13 and CM-15 through CM-18. Concurrent with teaching experience.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--54 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--30 hours in team planning and cycling with seminars when needed.

IV. Operational Objectives: The purpose of this module is to help the student learn systems of diagnosing the nature and causes of learning problems. The general objectives of this module should prepare the student to do the following:

A. Make records of observed pupil behavior that might indicate the presence of a learning problem or level of understanding of a specific concept.

B. Devise diagnostic instruments based on the data of pupil behavior that have been recorded.

C. Compare the results of his diagnostic device with the results of other tests or with pupil performance.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Record the actions of 6 second graders that suggest that they have an inadequate grasp of the concept of place value.

B. Devise a pre-test to measure the level of understanding by third graders on dictionary skills.

V. Modular Activity Flow Chart: See Figure 4.15.

VI. Description of Instructional Activities:

1. Evaluation of student performance in this module will be continuous and accomplished through team planning and cycling. The student first meets with his team to identify, through a comparison of observations made of pupils by team members, areas in which the level of understanding or skill should be assessed. These areas of concern are narrowed down by team use of pupil related data such as: standardized achievement

test reports, general aptitude tests, anecdotal records, and parent conference reports.

2. The student first defines the objectives and learning outcomes to be identified by the test. The subject matter content that pertains to this test is also identified. The student then constructs a table of specifications which shows the relationship between the objectives and the subject matter. Specific test items are then constructed by the student. During this phase of the module the student might use resource materials such as: local curriculum guides, teacher editions of classroom textbooks, and Ahmann and Glock's, Evaluating Pupil Growth.

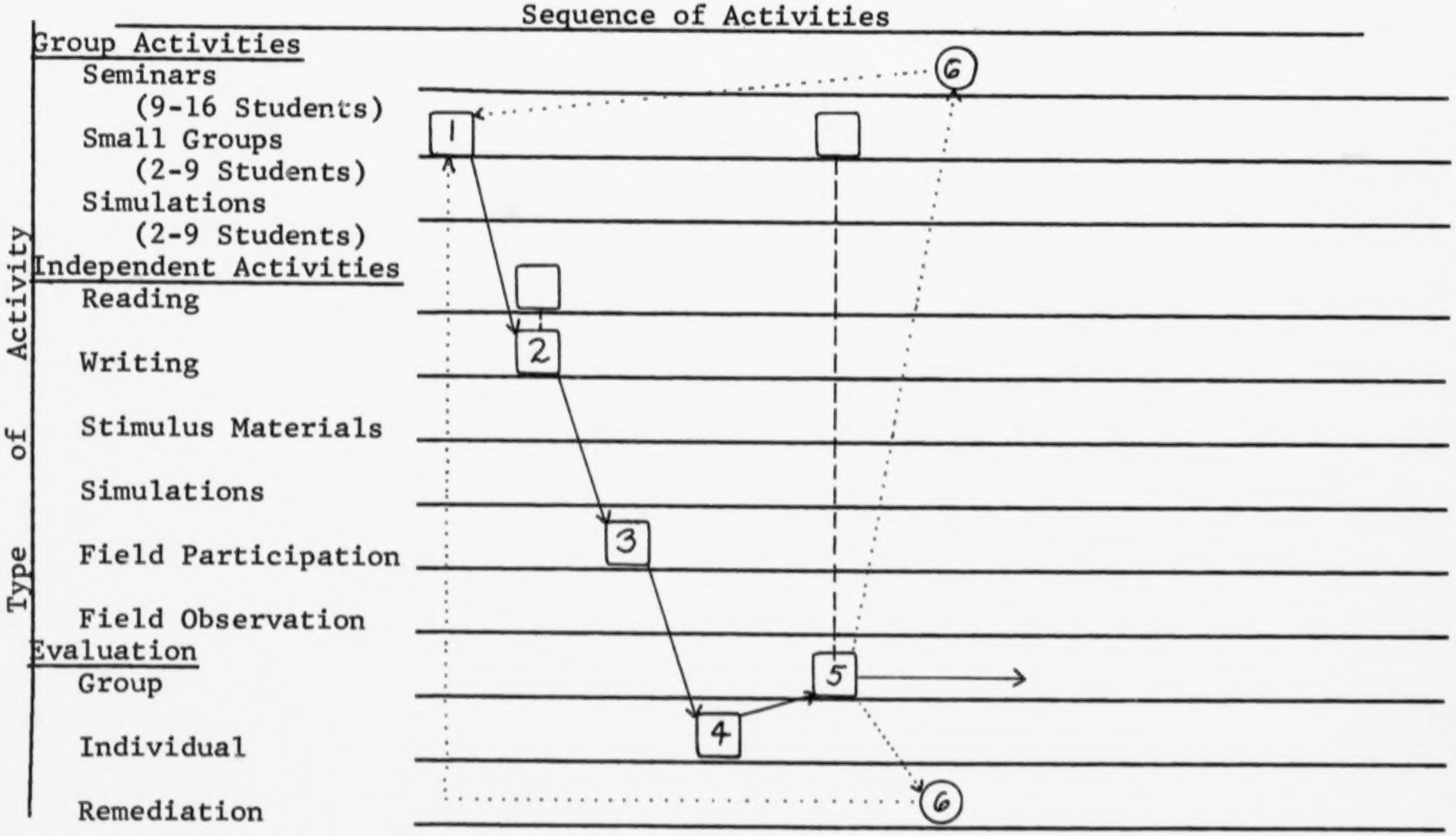
3. The student administers the device to the pupils. The general procedures for administering a test experienced by the student in CM-13 will be followed in this phase.

4. The student analyzes the data obtained from the instrument. An item analysis is conducted and the results of this are compared with the table of specifications. An individual profile sheet is prepared and used to compare the pupil performance on the student developed instrument with pupil performance on other devices.

5. The student presents his findings to his team. These findings will include evaluation of the device itself as well as an evaluation of the pupils' performance. The team will discuss the performance of the student at each phase of the module. The team discussion should lead to insights that would improve student performance on this module in the next teaching center.

6. If the student performance at any phase of the module indicates the need for a remedial conference, the student would be cycled to this activity. A seminar would be held if several students in the teaching center were having similar problems. Their activities would be conducted by the clinical professor. Upon completion of the conference or seminar, the student would be recycled through appropriate phases of the module.

Modular Flow Chart CM-14
Figure 4.15


Sequence of Activities
Type of Activity
Group Activities
Seminars (9-16 Students)
Small Groups (2-9 Students)
Simulations (2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
6

CM-15: Unit Planning

I. Prerequisites: Completion of Module CM-10 and simultaneous with Modules CM-11 through CM-14 and CM-16. Concurrent with teaching experience.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time-24 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--6 hours in team planning with seminars as needed.

IV. Operational Objectives: The purpose of this module is to provide the student with a workable format for organizing units of work in the five subject areas. The general objectives of this module should prepare the student to do the following:

A. Plan his teaching around topics to be dealt with on a long-term basis.

B. State long-range objectives as precisely as possible so that all activities and materials are clearly directed at fulfilling one or more of the objectives.

C. Develop a unit planning format that can include precise information but that is flexible enough to accommodate itself to the needs and interests of pupils as they may progress.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Plan and teach units in each of the five major subjects.

V. Modular Activity Flow Chart: See Figure 4.16.

VI. Description of Instructional Activities:

1. The student meets with his team in order to define the general mission of his teaching unit, and outline the relationships that exist between the unit and other learning activities.

2. The student gathers data necessary to develop the unit. The kinds of data that could be gathered might include: information concerning the individual learners, i.e., intellectual needs, special abilities and disabilities, unit resource documents and aids, and resource materials to assist in planning the unit, i.e., NEA Research Bulletins, and Burton's, The Guidance of Learning Activities. The student would then prepare an outline of the unit which would contain an over-

view, a statement of the general and specific objectives, and the learning activities that relate to the objectives, (resource materials such as Mager's, Preparing Instructional Objectives, could be used at this phase.) The student will then prepare the final unit by developing the elements of his outline.

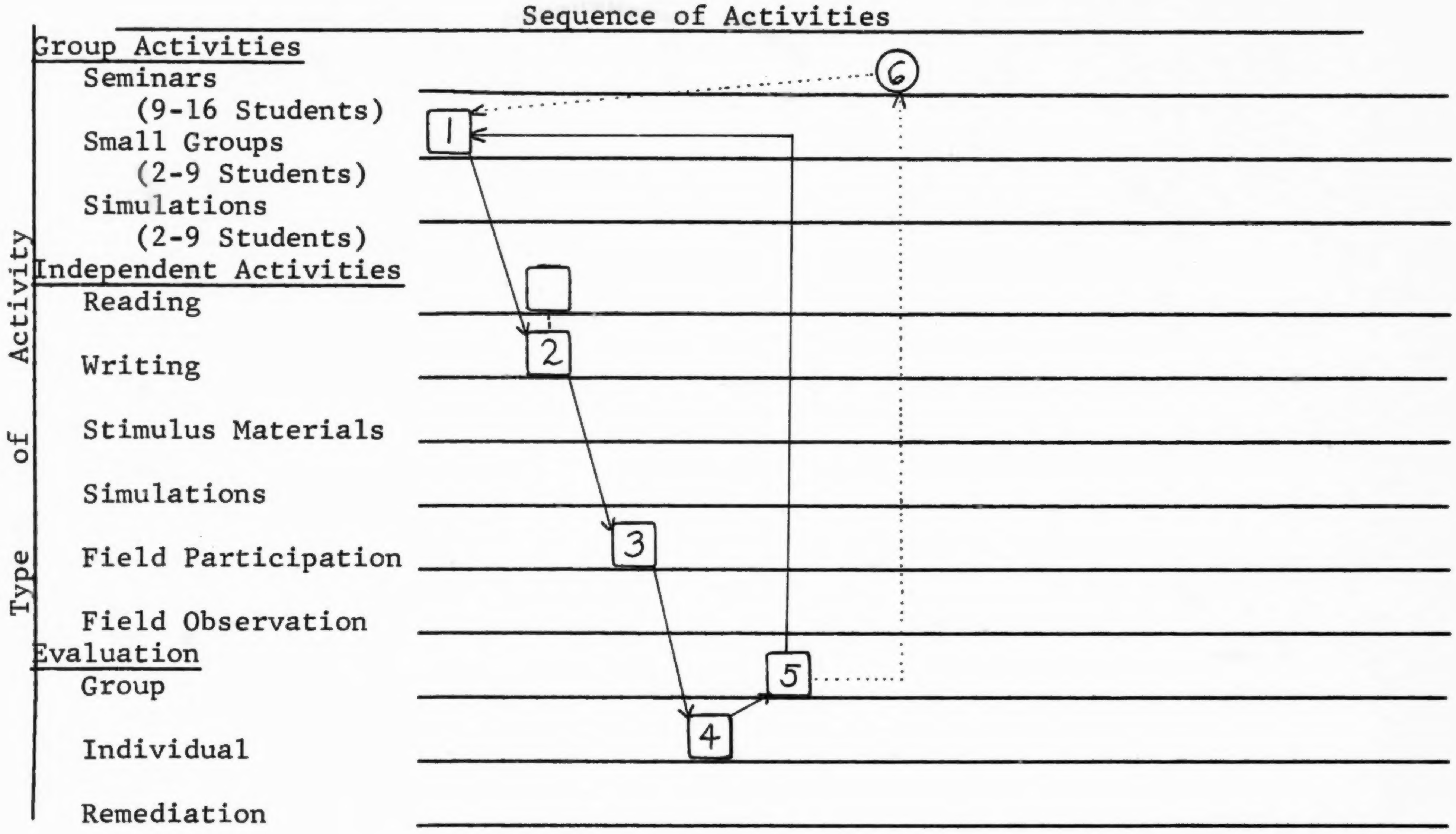
3. The student's teaching unit is put into operation. An observer will be present at various points during the unit to record and gather observational data as specified by the student or some other member of the team.

4. At various points during the unit the student analyzes data and evaluates his teaching.

5. The student meets with the team in the cycling process to discuss his progress in this module. The student's performance is further evaluated in light of the operational objectives and observational data. Suggestions for improved teaching in this and subsequent units will come from team discussions.

6. If student performance indicates need for a remedial seminar or conference, this would be conducted by the clinical professor. If several students were having similar problems a seminar would be held.

Modular Flow Chart CM-15
Figure 4.16


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

CM-16: Multi-group and Individualized Lesson Planning

I. Prerequisites: Completion of Module CM-10, simultaneous with Modules CM-11 through CM-15. Concurrent with teaching experience.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--12 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--12 hours working with the student in the team setting.

IV. Operation Objectives: The purpose of this module is to provide the student with skills of planning lessons that take into consideration variations in pupil needs and abilities. The general objectives of this module should prepare the student to do the following:

A. Balance the time commitments of the teacher among the children in the class.

B. Organize activities and materials in such a way that most efficient use is made of team members.

C. Plan evaluation devices that will keep the teacher and pupil informed as to pupil progress.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Plan and teach a mathematics lesson for a class having three ability groups in mathematics.

B. Plan and teach an individualized reading lesson.

V. Modular Activity Flow Chart: See Figure 4.17.

VI. Description of Instructional Activities:

1. The student meets with the team to plan multi-group activities for the class as a whole and to develop a lesson for an individual group. Lesson plan activities such as outlining the objectives of the lesson, stating the learning activities, gathering resource and teaching materials and reviewing pertinent pupil data are discussed by the team as a whole.

2. The student plans the lesson.

3. The student teaches a lesson, and pupil performance is measured. An observer records observational data on student performance

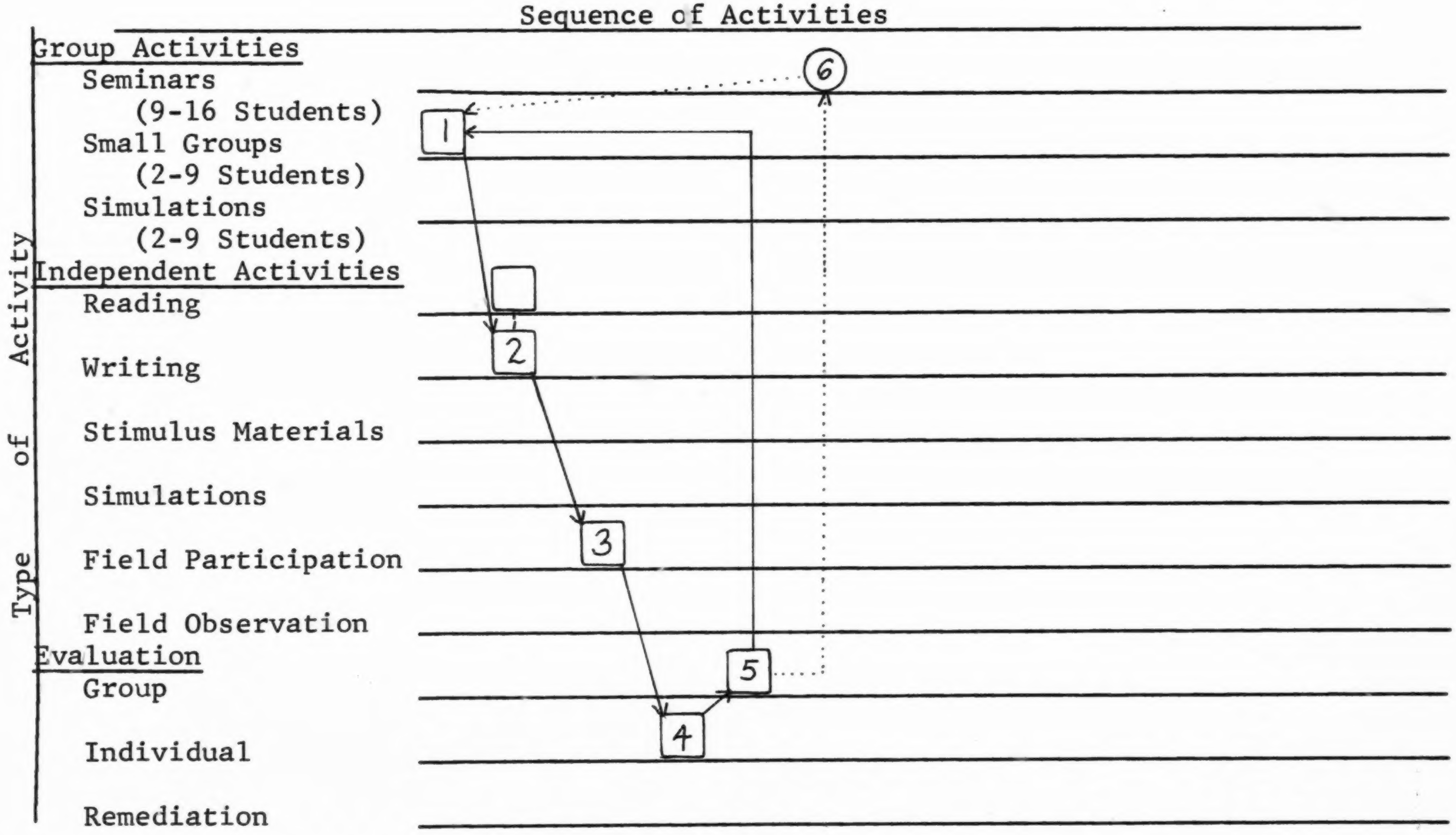
as specified by the student in the initial team planning conference.

4. The student analyzes data and makes an evaluation of his teaching.

5. The student returns to the team for the cycling process. The student's performance in this module is discussed and evaluated so that student performance in this module in the next teaching center can be improved.

6. If the student performance indicates a need for a remedial conference, this would be conducted by the clinical professor. A seminar would be conducted if several students in the teaching center were having similar problems.

Modular Flow Chart CM-16
Figure 4.17


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

MODULE GROUP 5: CURRICULUM PLANNING

CM-17: Identification of Curriculum Problems

I. Prequisites: Completion of Modules CM-11 through CM-16. Concurrent with teaching experience.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--20 hours.
University faculty time--10 hours conducting seminars.
Clinical Professor and Clinical Teacher time--10 hours.

IV. Operational Objectives: The purpose of this module is to increase students' awareness of varying levels of curriculum problems with which teachers are frequently called upon to deal. The general objectives of this module should prepare the student to do the following:

A. Differentiate between problems that are and are not within the realm of curriculum concern.

B. Identify the level of curriculum problem being dealt with by identifying the people most directly concerned with its resolution, e.g., a question of what units to teach next year in science in a certain school as compared with the question of having a national curriculum coordinating committee.

C. Carry on dialogue with teachers and/or members of the lay public in order to find out what their perceptions for the stated problem really are. Frequently the problem as originally stated is not the problem of real concern to the people involved. Time and interaction among the people involved may be needed to identify the problem.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Identify the question of the school contributing to the health of the children directly by serving breakfast and lunch, as a curricular problem in a suburban setting.

B. Participate in a discussion of a curriculum committee in such a way as to help the members come up with a statement of the problem they are concerned with.

V. Modular Activity Flow Chart: See Figure 4.18.

VI. Description of Instructional Activities:

1. The student is introduced to a real curricular problem faced by the faculty and administration of the school in which he is stationed. This will probably take place in his team setting first.

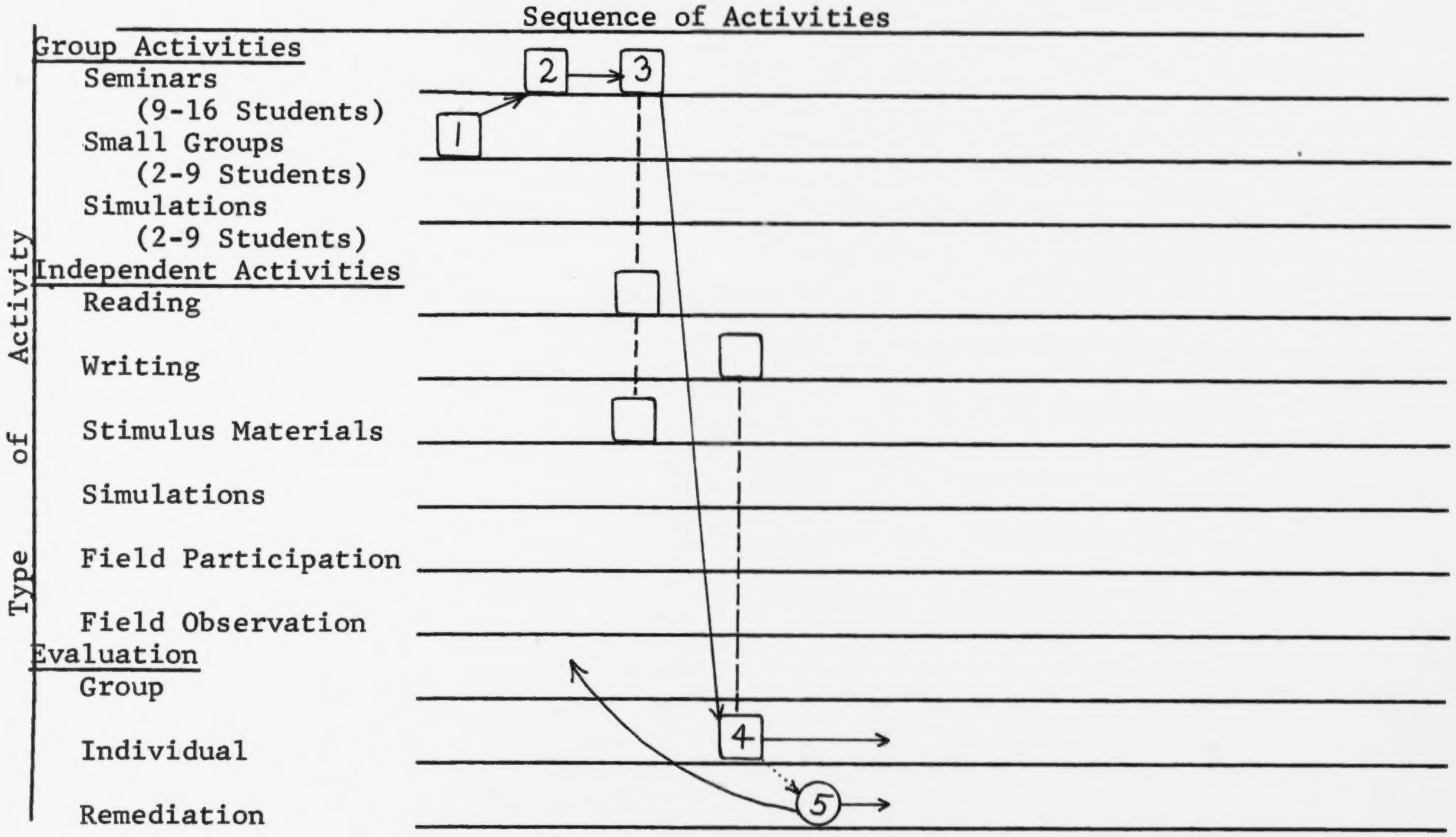
2. The student, along with members of his team, might attend a larger group meeting concerned with the curricular problem in question in order to get further clarification of the problem, and clarification of how the faculty sees the problem.

3. The student meets with the clinical professor or university professor in a seminar in order to analyze the particular problem in light of curriculum theories. (Resource material such as Beauchamp's, Curriculum Theory, might be utilized in this phase, as well as pertinent film loops and problem packets.)

4. The student will then prepare a report containing a statement of the problem and what aspects of the school program are affected by this problem.

5. Should the student's report fail to show evidence that the objectives for the module have been met, a remedial prescription would be prepared in conference with the university or clinical professor that would: (a) cycle the student back through appropriate aspects of the module, (b) prescribe other appropriate experiences to help the student meet the objectives.

Modular Flow Chart CM-17
Figure 4.18


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5

CM-18: Clarifying Curriculum Objectives

I. Prerequisites: Completion of Module CM-17. Concurrent with teaching experience.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--30 hours.
University faculty time--10 hours.
Clinical Professor and Clinical Teacher time--10 hours.

IV. Operational Objectives: The purpose of this module is to teach the student methods of interpreting curriculum objectives to other professionals and non-professionals. The general objectives of this module should prepare the student to do the following:

A. Use the *Taxonomy of Educational Objectives: Cognitive Domain*, or some other accepted taxonomy, in helping others interpret overall curriculum goals.

B. Use taxonomy in the interpretation of a specific curriculum package such as a lesson or unit plan. Each segment of the curriculum package should be explained using an appropriate taxonomic level.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Order statements of goals made by educators in a certain taxonomic level.

B. Translate statements of goals made by laymen into taxonomic terms.

V. Modular Activity Flow Chart: See Figure 4.19.

VI. Description of Instructional Activities:

1. The student will examine a specific curricular unit in his team meeting. The unit should be one that is currently being developed by a curriculum committee in the Teaching Center. Discussion will focus upon the determination of both daily and overall goals of the unit.

2. Clinical professors and/or university professors will hold a seminar to help students examine the practical problems involved in communicating theoretical goal statements and taxonomic reasoning to varied groups of people. Role-playing, case histories, film loops, and problem packets will be used

to provide a variety of experiences concerned with all phases of the goal clarification process.

3. The student will prepare a statement specifying specific and overall goals of the unit and analyzing these goals according to taxonomic procedures.

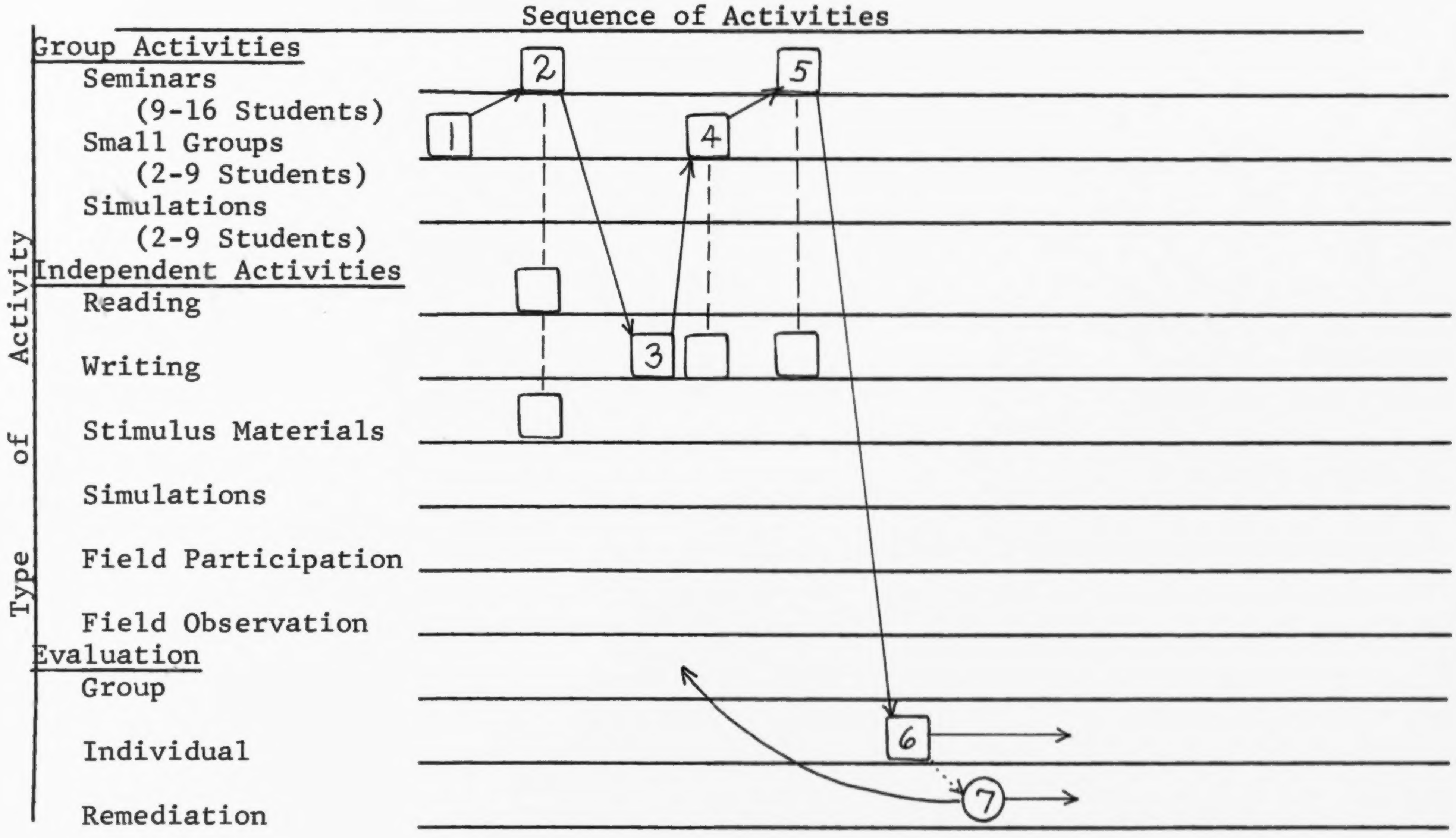
4. In attending meetings of the curriculum committee and lay groups, the student will continue to refine the relationships between goals of the unit and taxonomic categories.

5. The student will submit a paper to the seminar listing the various problems one may encounter in interpreting a curriculum to at least four different groups of people and mentioning strategies for dealing with each of these groups.

6. The student's paper will be evaluated by the professor. The professor determines: (a) whether the student should repeat aspects of the module, or (b) proceed to another module.

7. If the professor feels the student needs repetition or remediation, the exact nature of this work will be determined in conference with the student.

Modular Flow Chart CM-18
Figure 4.19


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7

CM-19: Planning Curriculum Development Schedules

I. Prerequisites: Completion of Module CM-18. Concurrent with teaching experience.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--20 hours.
University faculty time--15 hours.
Clinical Professor and Clinical Teacher time--5 hours.

IV. Operational Objectives: The purpose of this module is to help the student develop techniques for systematically planning a curriculum unit. The module will also help the student utilize school and community personnel most efficiently in the development of his curriculum. The general objectives of this module should prepare the student to do the following:

A. To identify all planned elements of his curriculum.

B. Know the order in which these elements should be written.

C. To identify all persons who should be involved in curriculum development.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. List the members of a specific community who should be invited to preliminary discussions concerning an innovation in the reading curriculum.

B. List sequentially specific elements of a curriculum unit according to the most teachable form.

V. Modular Activity Flow Chart: See Figure 4.20.

VI. Description of Instructional Activities:

1. The student will meet in a seminar in order to discuss and differentiate techniques for ordering the elements involved in the process of curriculum development. Planning techniques such as PERT and Beauchamp's curriculum classification model may be used. The students will receive a simulated curriculum problem at the end of the seminar.

2. The students will work independently on the construction of a plan to resolve the curriculum problem. Planning techniques

will be employed to identify the elements of the problem and schedule inputs to achieve intermediate and terminal objectives.

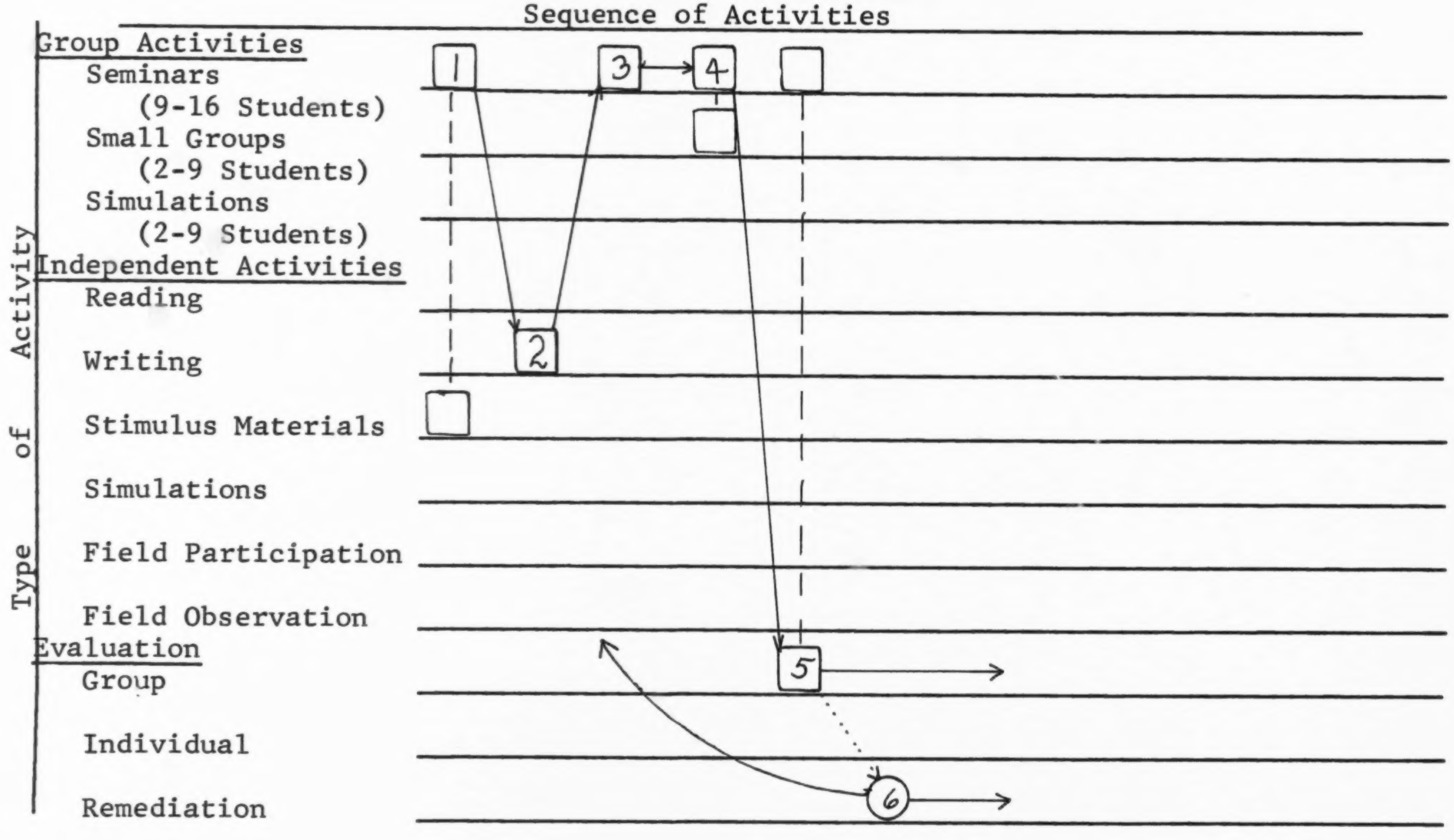
3. The university professor and the clinical professor will conduct seminars in which they will help the students analyze and evaluate the student plan through the use of theories of interpersonal behavior such as exchange theory and social systems theory. The discussion will focus upon such concepts as: (a) the interaction process in the dyad and larger groups, (b) the effect of norms and status, (c) the communication network, (d) group productivity, and (e) how these concepts relate to the implementation of the curriculum plan.

4. The students will refine their plan by meeting with professional and lay people in order to identify individuals and groups who may provide input to the plan, the kind of input they may provide, the timing of the input, and the criteria which must be met before the input occurs.

5. The students will meet in seminars with the university professor and/or the clinical professor and in team groups to evaluate student performance. This process will continue until the objectives of this module are achieved.

6. If the professor feels the student needs repetition or remediation, the exact nature of this work will be determined in conference with the student.

Modular Flow Chart CM-19
Figure 4.20


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

CM-20: Evaluation of Curriculum

I. Prerequisites: Completion of Module CM-12. Concurrent with teaching experience.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--20 hours.
University faculty time--5 hours.
Clinical Professor and Clinical Teacher time--15 hours.

IV. Operational Objectives: The purpose of this module is to make students aware of the techniques for evaluating curriculum. The general objectives of this module should prepare the student to do the following:

A. Identify in curriculum goals certain measurable behaviors.

B. Select the appropriate instruments for evaluating these behaviors.

C. Design evaluative instruments for those behaviors for which there are no existing instruments.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. List the expected behavioral outcomes of a curriculum.

B. Choose the standardized tests that come closest to measuring the goals of the curriculum program.

C. Design a parent interview protocol to determine parental attitudes toward the curriculum program.

V. Modular Activity Flow Chart: See Figure 4.21.

VI. Description of Instructional Activities:

1. The student would be oriented to a specific curriculum problem being considered by a curriculum committee in the Teaching Center. The orientation would occur at first in a seminar conducted by a university professor and/or a clinical professor.

2. The student would then attend one or more of the meetings of a curriculum committee at the Teaching Center.

3. The student would then attend a series of seminars conducted by the university and/or clinical professor to assist the student in using existing measurement techniques for assessing whether or not the objectives in changing pupil behavior had been achieved, whether the means selected for the achievement of objectives are adequate, and whether the objectives should be retained. Simple problem situations designed to elicit various measurement techniques will be presented to the students.

4. The student will attend a series of seminars conducted by the university and/or clinical professor to assist the student in developing measurement techniques for the same purposes as outlined above.

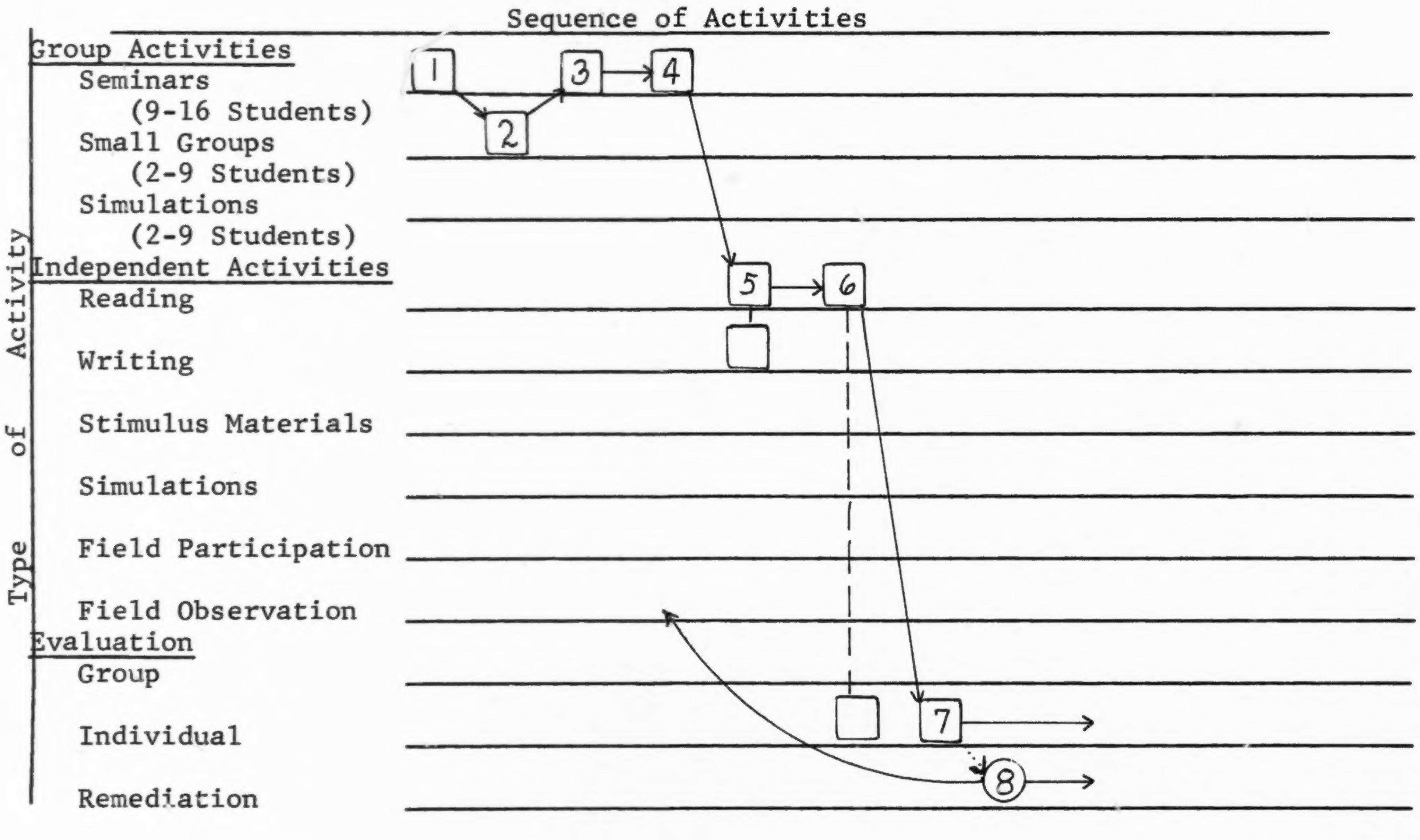
5. The student will examine sample curriculum designs, and will differentiate between those objectives that are expressed as measurable behavior and those that are not. He will create a variety of evaluation instruments to measure the similar behaviors.

6. The student will simulate an evaluation of a segment of the curriculum being worked on by the curriculum committee utilizing the measurement techniques he has been exposed to. He will receive the continuing assistance of the clinical professor. Evaluation of the student's performance will be continuous.

7. The student will move on to the next module when he has shown sufficient expertise in the use of existing instruments, the design of new instruments, and the evaluation of curriculum.

8. If the professor feels the student needs repetition or remediation, the exact nature of this work will be determined in conference with the student.

Modular Flow Chart CM-20
Figure 4.21


Sequence of Activities
Type of Activity
Group Activities
Seminars (9-16 Students)
Small Groups (2-9 Students)
Simulations (2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7
8

CM-21: Interpretation of Curriculum to Public

I. Prerequisites: Completion of Module CM-20. Concurrent with teaching experience.

II Placement of Module: Senior, professional year.

III. Estimated Time: Student time--20 hours.
University faculty time--5 hours.
Clinical Professor and Clinical Teacher time--15 hours.

IV. Operational Objectives: The purpose of this module is to give the student some insight into the techniques available to him for keeping the public informed about the curriculum. The general objectives of this module should prepare the student to do the following:

A. How to use discussion groups, symposia, panels, speeches, and other discussion techniques for public communication.

B. How to use school visitations, community projects, parent helpers, etc. for communication.

C. How to use inservice or parent education programs effectively for communication of curriculum to public.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Plan and conduct a panel discussion on the introduction of Negro history to the curriculum of an inner city school.

B. Plan and carry out a series of school visitation days for parents to observe the children in action with the new health curriculum.

C. Establish a parent education course on the new social studies curriculum in conjunction with the university.

V. Modular Activity Flow Chart: See Figure 4.22.

VI. Description of Instructional Activities:

1. The student will be introduced to the problem of communicating the curriculum to the public by participating in a curriculum committee of which the clinical professor is chairman.

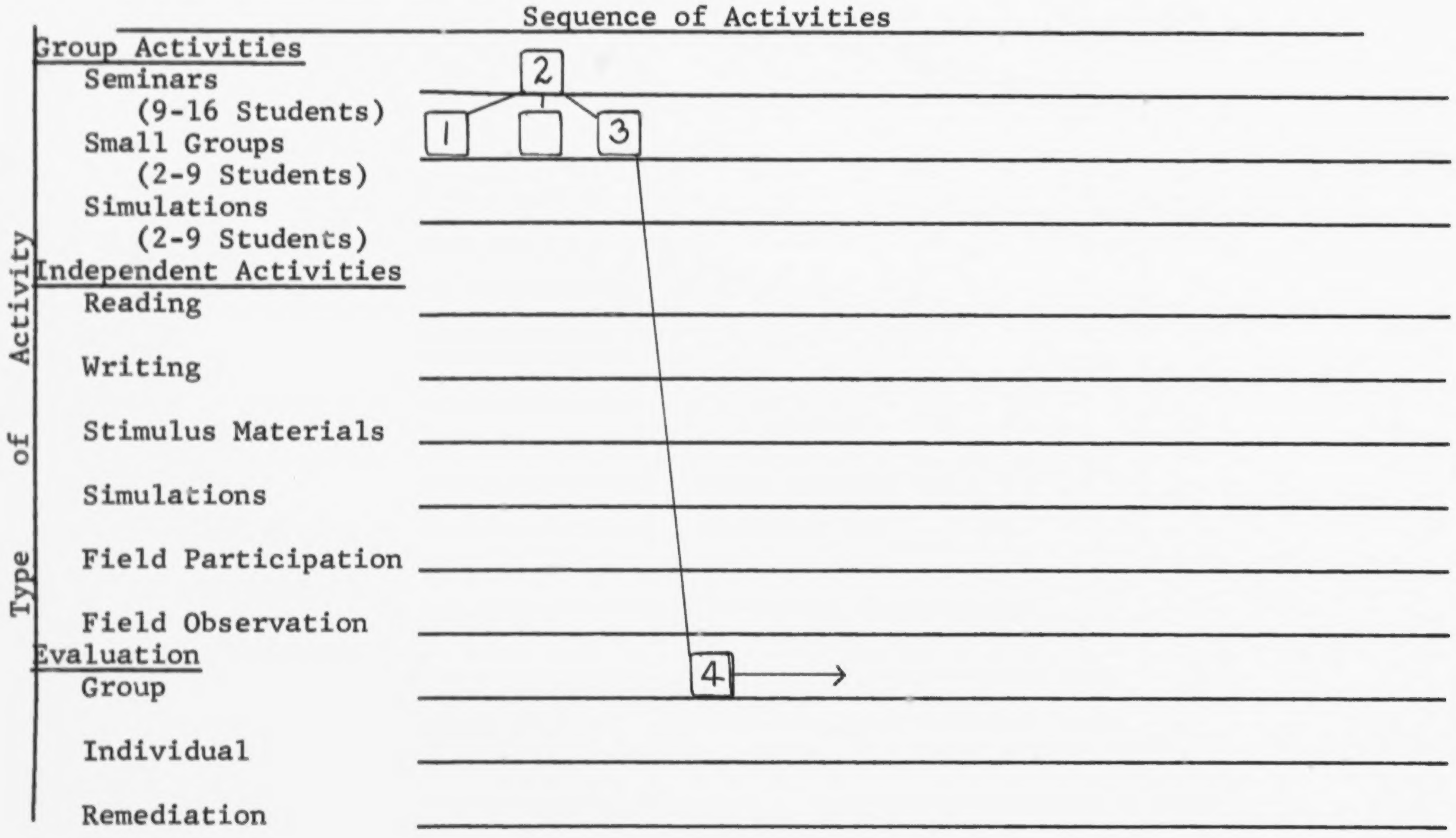
2. The university professor would hold seminars in which the students would discuss the concepts of power structure, group

dynamics, communication networks, and exchange theory. The students might be asked to read Kelman's "Process of Opinion Change" in Public Opinion Quarterly, Vol. 25, Spring 1961, and selected sections of Hovland, et. al., Communication and Persuasion, and the "Yale Studies in Attitude and Communication". The students will engage in group activities designed to sharpen their perception of the dynamics of interaction, will observe and evaluate other social groups utilizing the concepts mentioned above.

3. The student will become a participating member of the school curriculum committee, and will utilize whenever appropriate the skills he has learned in this module.

4. The clinical professor will hold group meetings of participating students to evaluate the student's performance as a member of the curriculum committee and to furnish guidance to the student until the operational objectives of this module are met.

Modular Flow Chart CM-21
Figure 4.22


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4

CHAPTER 5

CHILD DEVELOPMENT COMPONENT

Rationale

The Child Development Component is designed to fulfill three major goals. First, that the student should become aware of the value of carefully and objectively observing child behavior. Second, the student should learn to discriminate between the kinds of behaviors observed, and should increase the number of observed dimensions. The third goal is to increase the student's repertory of possibilities for attempting to "make sense" out of observed behavior. Inherent in these goals is the assumption that if the teacher does, in fact, become attuned to "taking in" child behavior, is cognizant of many dimensions of children's behavior, and has some alternative means for considering the meaning of that behavior, then teaching will generally be affected in positive ways.

To achieve the above goals, central focus has been given to actively involving the students in describing and analyzing child behavior throughout the entire component. Techniques, theories, and normative information from the child development area have been selected on the basis of pertinence to this effort.

Judging by the prevalence of child development curricula, there evidently has been a consensus that knowledge of the ways in which children grow and develop is of value for teachers. The question of whether or not this knowledge makes a difference in the way teachers teach has not been answered, and has rarely been examined in any systematic fashion. What evidence is available would seem to suggest that it may not make much difference; for example, Combs (27) and Brown (20) point out the discrepancies between teachers' knowledge of "good" teaching practices, and their actual teaching behaviors. If knowledge of child development has not, in fact, made a difference in teaching practices, it may have been due to the absence of any framework in training programs for connecting the "book knowledge" with the teaching task as it is perceived by the practitioner. The Child Development Component proposed as part of this teacher preparation program provides the framework to avoid the reported "compartmentalization" of what is known from what is used.

The provision of links between "theory" and "practice" has sometimes been attempted through the procedure of having students make observations of children while they are enrolled in child development courses. Evidently, however, these observations have commonly been considered to be merely supportive of and peripheral to the ideas being developed through text, lectures, etc. Sarason (109), after reporting on his work with relatively unstructured observation and discussion groups, recommended for the child psychology course, "a series of closely supervised observational experiences which has as its goals the exemplification of principles and concepts considered in the lecture situation." One notes that even there the acquisition of knowledge is only secondarily considered to be derived from observation. The approach suggested for this component is to use systematic observations of behavior as a major vehicle through which learning may be derived. This has evidently not been previously attempted in any systematic fashion.

Although these proposed procedures of engaging students in deriving child development principles via observation are relatively time-consuming as contrasted with imparting principles via lectures or readings, there are several other considerations which seem more significant than the time factor. For example, by initially actively engaging students in making observations of mediated and live situations, the "sensory intake" proposed as prerequisite to more abstract conceptualization is assured. This is considered highly important and provides the justification in itself of considerable time spent in making observations. Beyond this, however, there is the need expressed by Gordon (53) and others that an important continuing responsibility of the teacher should be the systematic acquisition and utilization of data concerning many behavioral dimensions of children in the classroom. The advent of team-teaching and the participation of paraprofessionals make these functions highly realistic for ordinary classroom practice. For example, under several current programs paraprofessionals are being trained to make behavioral observations which are then made available to the professional teacher to utilize in decision-making about a program. Unless the professional teacher has himself had considerable experience with the purposes and limitations of such measures, he will be in a poor position to direct the paraprofessional in these activities. On the other hand, if the student in the course of learning about child development in the teacher training program has used several kinds of observational techniques and formats, he will be equipped to use these resources to advantage. The considerable time expended in making behavioral records in the course of professional training, as it is conceived in this component, is thus seen as justified since it seems likely that the systematic use of classroom observation will be an important future teaching behavior.

As part of the effort to provide students with an alternative means of explaining observed children's behaviors, the decision was made in planning this component to give substantial attention to several major developmental or learning theories. There seems to be sufficient reason why emphases on theoretical concepts of child development are appropriate for teacher preparation. First, in this as in other areas, a theory does provide the perspective for taking a look at a situation in a way that allows a certain set of data to emerge that might otherwise have been unnoticed. Second, we assume that people are always operating from some frame of reference, some theoretical position, albeit often naive, disjointed, and implicit. Through the process of contrasting major theories with each other and with the existing frame of reference, some additional and useful intake of information and an explicit differentiation of ideas can potentially occur. There would seem, for example, to be many possible practical benefits from contrasting the ways various learning or developmental theorists would go about the task of modifying behavior. Finally, since instructional programs and materials are available which utilize differing theoretical bases for their activities, sequences, etc., it would seem important to have the teacher-consumer be aware of the nature of some of these theories.

The decision as to which theories to include in this component was primarily based on judgments of probability of contributing to the understanding of the behavior of children in classroom situations. Another important consideration in selection was that each of the theories to be included represent a different way of looking at behavior that would be minimally contradictory or redundant of the others. Although it is felt by the designer of the component that the four theories selected (reinforcement theory, phenomenological theory, Piagetian cognitive theory, psychoanalytic theory) do meet these criteria, it should also be recognized that these kinds of decisions necessarily entail considerable bias. The basic intent of providing the student with alternative conceptual structures such as child behavior, would probably be served as well through the selection of some alternative theories. Substitution of other theories for those proposed here could be made without violation of component goals.

Justification for the Inclusion of the Component in the Total Program

There would seem to be little justification for only including the typical child development "course" content in the teacher preparation program. If, however, as is proposed for this component, students are actively involved in a planned program of observing and considering child behavior in a variety of situations and at various developmental levels, they will develop skills and attitudes directly applicable to and valuable in the teaching situation. Although much of the usual content of child development and educational psychology texts and lectures may be acquired by the students in the process of utilizing resource materials supportive to what is primarily being confronted in observational encounters, little precise content is to be specified as objectives of the component. It is this difference in emphasis which most clearly differentiates this component from the usual child development courses. It is this emphasis which is thought to provide the potential for actually affecting teacher behavior, and therefore, furnishing the justification of the inclusion of the component in the teacher preparation program.

Specifically, it is anticipated that the student will, as a result of experiences encountered in the Child Development Component, do the following in a teaching situation at the end of the program:

1. Will support inferences and evaluations about children's behavior with reportorial data.

2. Will generate multiple alternative rationales for a given discrete child behavior, and will be able to state what subsequent behavior from the same child would be assumed to support/negate the various

hypotheses.

3. Will evidence knowledge of and accommodation for individual differences in planning for classroom activities. (For example, will arrange for instruction on various levels.)

4. Will evidence in the nature of planning done, the belief that the existing state of children's behavior is modifiable. (For example, will plan for behavioral goals rather than in terms of "blanket" utilization of activities.)

5. Will recognize wherein behavior and abilities are, in general, typical of age and stage developmental levels and wherein they differ from the norms.

6. Will routinely and systematically obtain behavioral data as one means of determining the content and instructional procedures to be used in the classroom program.

7. Will routinely and systematically obtain behavioral data as a means of evaluating outcomes of school programs.

8. Will compare wherein learning programs are, or are not, derived from or consistent with conceptual structure of some major theoretical positions.

Organization of the Component

The organizational structure of the modules of the Child Development Component consists primarily of a linear sequence without provision for branching. There are, however, some limited options as to the sequence in which selected modules may be undertaken.

Students are expected to proceed in linear sequence through modules: CD-1, Skills of Making Open Observations; CD-2, Using Open Observations; CD-3, Skills of Making Closed Observations; CD-4, CD-5, CD-6, Using Open and Closed Observations of Child Behavior in Three Structured Situations; Related Reading; Discussion (The latter three, CD-4, CD-5, and CD-6, are highly similar in format and purpose, and are jointly titled although each comprises a separate module.)

Module CD-7, Resources for Child Development Inquiry, should not precede CD-6, but may be undertaken at any later point in the sequence. It is not considered prerequisite for any other module, but should be prerequisite to any extensive independent study or field investigation in child development areas, and should not be considered an optional module, i.e., it must be completed prior to the resident year.

Module CD-8, Theory and Empirical Investigation in Child Development, may be taken after CD-6, and must be completed prior to Modules CD-9 through CD-13. It must be followed by CD-9, Reinforcement Theory. (Note that Module CD-9 is also labeled as TTP since it is considered an integral part of both component sequences.) Upon completion of CD-9, the student may then elect the order in which he will undertake Modules CD-10, Phenomenological Theory: CD-11, Cognitive Theory--Piaget; CD-12, Psychoanalytic Theory. All three of these, however, should be completed before entering the final module of this component, CD-13, Longitudinal Studies.

Rationale for the Placement and Sequence of the Modules

The arrangement of experiences of this component, both within modules and between modules, has been based on several somewhat related considerations. There is, first, the concern that students have exposure to the "concrete" sensory experiences of children's behavior prior to attempting to deal with abstract notions or explanations about that behavior. This is closely related to the second concern that the modification of the students' naive approaches to behavioral observation and explanation be undertaken on a progressive basis. The rationale behind both of these rests on the assumption that the gradual replacement of naive global and sensory impressions with increasingly differentiated and abstract conceptualizations is more productive of long-term change than is a highly discrepant imposition of conceptual structure without intermediate linkage.

Another consideration is the concern that students become active in the process of obtaining information and searching out meanings from the information. The proposed involvement in data-gathering insures this in part. It is also considered advantageous to engage students in sorting through the data to induce generalizations/principles. This kind of encounter is assumed potentially to provide a personalized ideational anchorage for related reading and later direct experiencing.

A final important factor in arranging the modular structure is the concern that skills and knowledge developed at one level be of sufficient importance to warrant later inclusion and re-utilization. Nearly all of what is detailed as operational objectives in early modules of this component is also necessary to performance in later modules and in the resident teaching situation.

The following progression, based upon the above considerations, is followed in the arrangement of modules for the Child Development Component. The students first perfect the skills of using open systems of behavioral observation. This is considered to be closely akin to the kind of observing and reporting engaged in by the student prior to training, and it is placed first in the sequence for this reason. Through the medium of making open observations of individual and group child behavior, gross difference between age levels and individual differences at a single level will then be "discovered" and stated as tentative principles to be substantiated by later observations and learnings.

Next, the student will learn to use closed category systems for recording and communicating observed behaviors. Taxonomies for varied behavioral domains will be employed in recording observations to increase awareness of dimensions that might be overlooked by the naive observer in utilizing open observational systems. Training in reliably recording behaviors in sampling formats will be conducted. Data on dimensions such as social interaction with peers and adults, verbal behavior, informal group decision-making behavior, activity choices, etc., will be collected in a systematic fashion to examine individual, sex, and age differences. This data can then be used to substantiate previous principles formulated from open observations, to induce new ones, and to serve as a focus for related reading assignments and discussion.

By this point, it is expected that the students will have had sufficient exposure to a range of child behaviors and to the means of recording and examining behaviors to enable them to undertake fruitful independent inquiry in this area. Therefore, a module further acquainting the student with relevant resources for inquiry is placed at this juncture.

During the junior year and for a substantial portion of the senior year, students will be required to work with a child or children from nearby elementary schools for whom special attention is deemed desirable. To utilize this field experience for the specific purposes of the Child Development Component it is planned that an autoinstructional series can be developed which would focus on the student's interaction with and observations of the tutored child or children. The autoinstructional series would consist of sets of interrelated questions to which the student would respond in open-ended fashion, and would, thereby, be led to consider the meaning of data which is either already available to him or, more rarely, which would be supplied to him in the autoinstructional materials. As the students, in progressing through the Child Development Modules, perfect observational skills and use them to contrast age, individual, and sex differences from mediated observations, they will also then be directed as part of the modular activities to complete corresponding sections of the autoinstructional series which will deal with the same issues and observations in relation to the tutored child and his classroom. This would be a recurring activity of several of the observational modules of the junior and senior years. It is included to insure the student's awareness of the possibilities for utilizing his skills and knowledge in an on-going "live" classroom situation. The accumulated results will essentially comprise an extensive case study of the tutored child and his educational milieu.

After developing and using observational skills of various kinds and for various purposes, the students will next become involved in modules which will acquaint them with some learning and developmental theories selected because of their relevance and usefulness in explaining child behaviors. A module dealing with the general role of theory in relation to explanation and investigation in child development, precedes study of any discrete theory. Some introduction to evaluation of research in terms of control, probability, sampling, etc., will also be introduced in the general module. Filmed and/or written exemplars illustrating theoretical concepts will be used initially for each theory studied followed by interplay between: (a) using appropriate observational techniques learned at the earlier levels to obtain data relevant to the theoretical concepts, and (b) reading about and discussing implications for the concepts as explanations of observed behaviors. The students will be, in part, learning about theories through becoming engaged in obtaining the kinds of data about children considered most useful by the respective theorists. Some of the utility or limitations of the theory are likely to become apparent in this process. To examine obtained data, students will need to make comparisons between individuals and between groups, between predictions and the actual data, and within individual records over time. Therefore, knowledge of statistical comparison will be considered prerequisite to the theory modules. In connection with each theory module, it is also deemed desirable to involve the students in reading selected research reports which are representative of the ways in which researchers utilize theory to generate hypotheses.

The final module will be concerned with some of the findings of longitudinal studies which are considered to have relevance to educational practice. Prior modular experiences are considered to provide necessary background for the reading and discussion of research necessary for this study.

At the final level, in the resident teaching situation, the students will not be involved in specific child development modules, but will be expected to utilize skills and concepts acquired at previous levels of this component in structuring, implementing, and evaluating instructional progress.

CD-1: Skills of Making Open Observations

I. Prerequisites: Completion of PST-1.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--5 hours.
University faculty time--0 hours.
Clinical Professor and Clinical
Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to provide the student with introductory skills in observing the behavior of children. The general objectives of this module should prepare the student to do the following:

A. Record full descriptions of observed child behaviors.

B. Recognize that statements about child behavior are not "pure" reporting practices.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Identify in his own written reports on children's behavior and the reports of others those portions which are inferences or evaluations.

B. State at least three reaons why the reports of the same situation written by different individuals will have substantial variations regarding what was observed.

V. Modular Activity Flow Chart: See Figure 5.1.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students will meet in small groups where they will be given packets of information directing them to perform certain tasks associated with the module. They will discuss the instructions until they are clear as to what they should do. They will then view several short episodes of child behavior, and will write brief reports on what they have observed. Students will then examine and discuss their reports with particular reference to similarities and dissimilarities of what they observed

and their use of value-laden adjectives to describe child behavior. Re-runs of the episodes should then be available for rechecking observations.

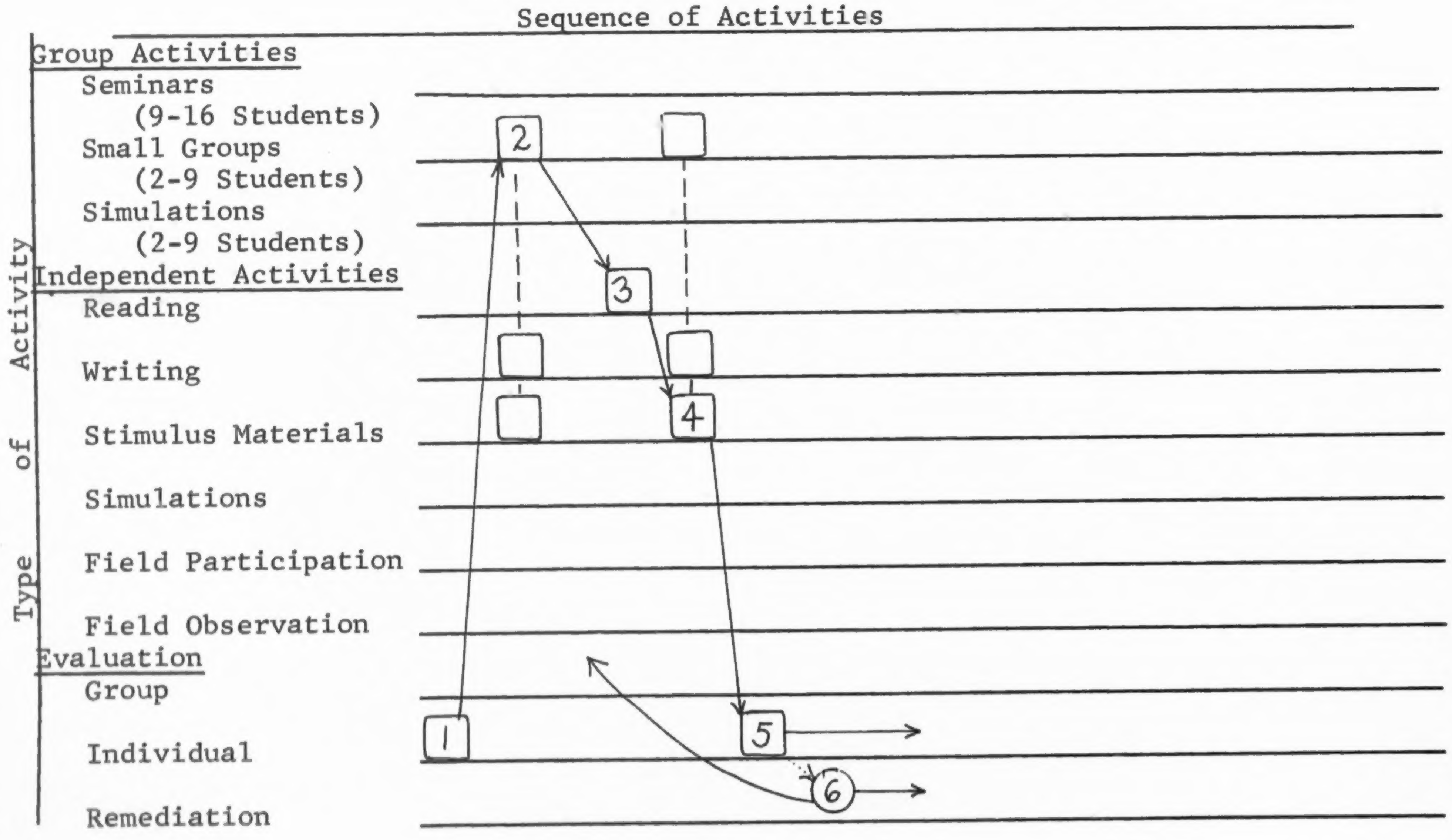
3. The students will then work with individually programmed materials in which exemplars of reports, inference, and evaluation are given, and practice is provided in identifying them.

4. The students would view a second group of short episodes of child behavior, and again write reports of what they observed, and discuss their reports with reference to: (a) similarities and dissimilarities of what they observed, (b) their use of value-laden adjectives.

5. Post-test to determine if the student should: (a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

6. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CD-1
Figure 5.1


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

CD-2: Using Open Observations

I. Prerequisites: Completion of CD-1. Concurrent with TTP-2, CM-9, PST-3, and a tutorial experience.

II. Placement of Module: Junior, pre-professional year.

III. Estimated time: Student time--25 hours.
University faculty time--2 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purposesof this module are to provide students with experiences in observing children at varying age levels and to involve them in using these observations to identify patterns of growth and development. The general objectives of this module should prepare the student to do the following:

A. Recognize developmental differences between age levels, between sexes, and across individuals of the same age and sex.

B. Formulate observations into tentative statements of principles.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. State at least four principles of child development which he has derived from observations.

B. Submit the "anecdotal" reports of observed behavior which support the stated principles.

V. Modular Activity Flow Chart: See Figure 5.2.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:
   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students will briefly examine and discuss their reports in regard to the objectives of Module CD-1, i.e., to note value-laden adjectives, to identify inference and evaluation, to compare descriptions for completeness and objectivity. They will also analyze the content of their reports to derive and record general tentative principles about age, sex, and individual differences. Reruns of episodes should be available for rechecking observations.

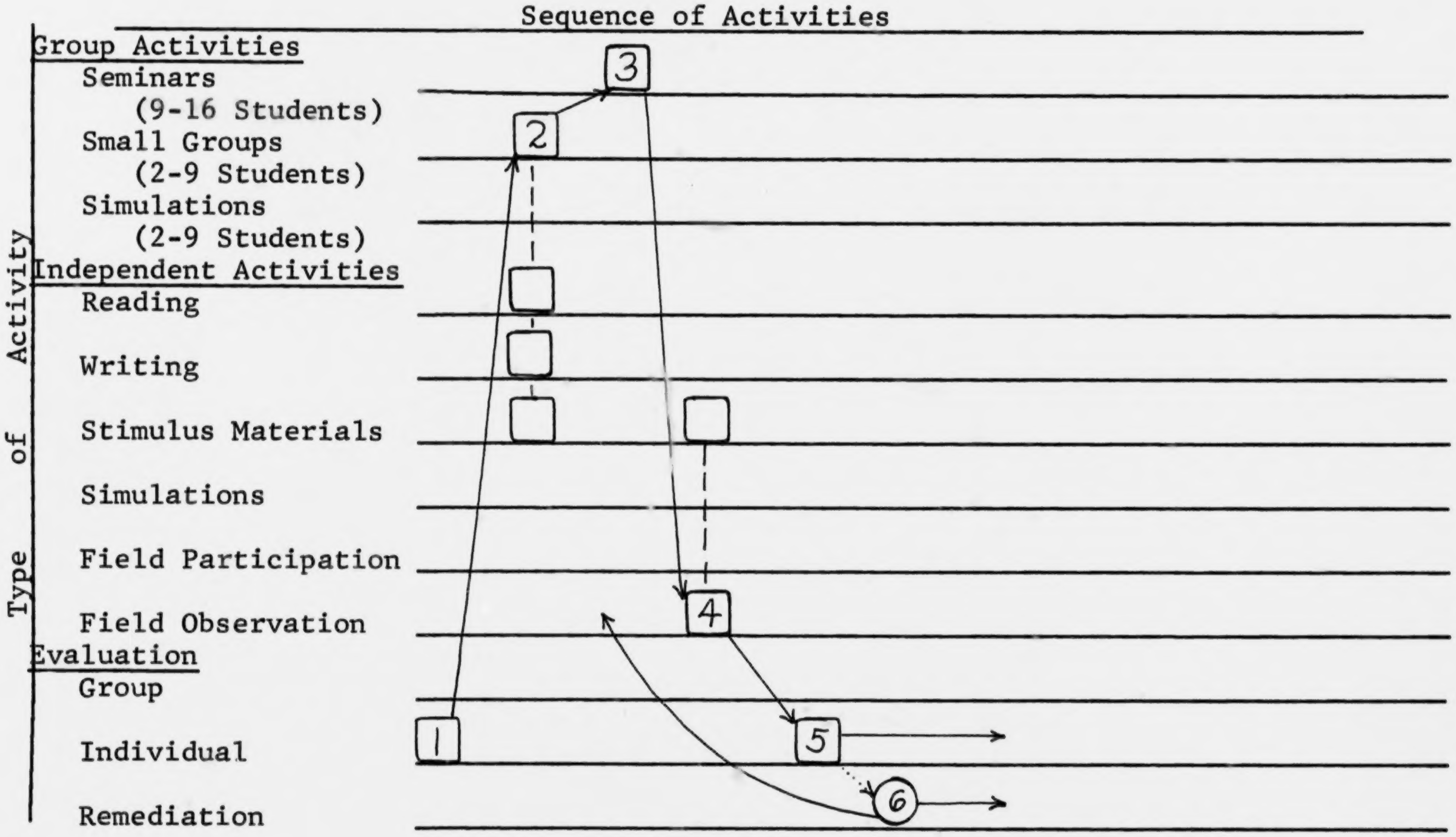
3. Students will meet with a faculty member to submit and discuss the general principles they, as a small group, have formulated.

4. The students will work individually to complete the portion of the field experience autoinstructional series which requires application of what has been learned in this module. It will involve: (a) making similar observations of the children being tutored in his/their classroom, (b) responding to a series of questions designed to lead the student to consider and evaluate these experiences.

5. Post-test to determine if the student should:
(a) repeat certain parts of this module, or engage in other remedial work.

6. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CD-2
Figure 5.2


Sequence of Activities
Type of Activity
Group Activities
Seminars (9-16 Students)
Small Groups (2-9 Students)
Simulations (2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

CD-3: Skills of Making Closed Observations

I. Prerequisites: Completion of CD-2.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--4 hours.
University faculty time--1 hour.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to provide the student with the introductory skills of making reliable closed observations of children's behaviors. The general objectives of this module should prepare the student to do the following:

A. Record reliably whether: (a) a specified event occurred within specified time spans for an individual or a group being observed, or (b) which of a selected taxonomy of behaviors were exhibited by the individual or group being observed (in both time sampling and point-time sampling format).

B. Summarize on a table or graph the comparative frequencies of behaviors for different individuals or for the same individual on different categories.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Record (to the criterion of a pre-established reliability level) the frequency of specified behaviors for a filmed behavioral sequence.

B. Construct graphs or tables representing frequencies for individuals, sexes, and age levels on supplied data for a three-category taxonomy of behaviors.

V. Modular Activity Flow Chart: See Figure 5.3.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:
   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

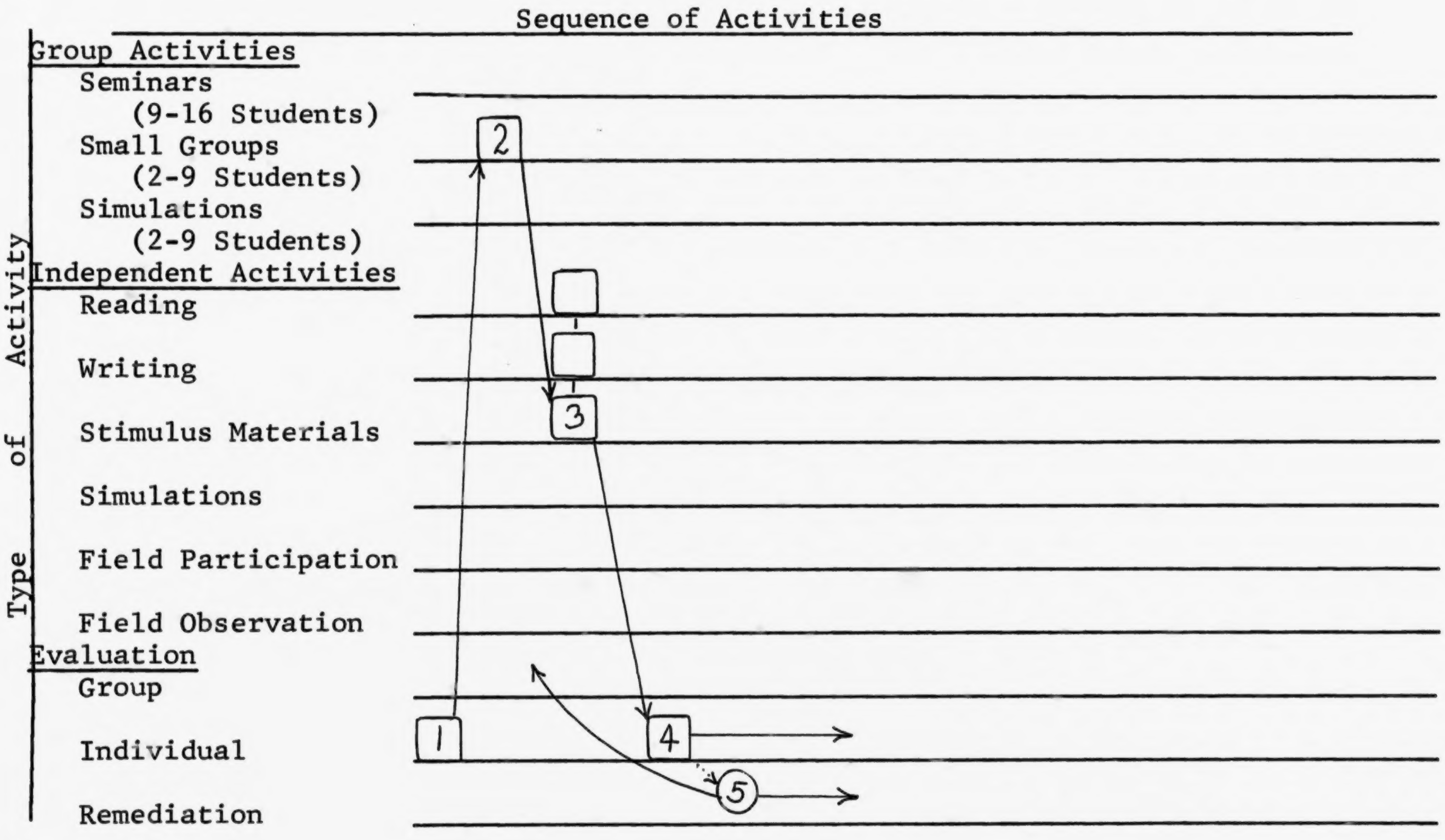
2. A faculty member will discuss with a small group of students the rationale and format for making closed observations, discuss the importance of making reliable observations and describe procedures for summarizing data.

3. Students will be given packets of instructions directing them into certain tasks associated with this module. They will be directed to view films of children in informal classroom activity and to practice recording at superimposed time signals whether or not they observe given discrete behaviors--for example, whether a child "moves entire body to a new location or position." They will also practice doing time-sampling and then point-time sampling in which they record for a supplied taxonomy of behaviors the ones that were observed--for example, whether a child was involved in motor interaction, verbal interaction, or no observable interaction with people or materials. Students will compare their own observational records with those of other students and/or standards provided with some of the films. The instruction packet will also include directions and materials for graphing some of the observations.

4. Post-test to determine if the student should:
   (a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

5. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CD-3
Figure 5.3


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5

CD-4, CD-5, CD-6: Using Open and Closed Observations of Child in Three Structured Situations; Related Reading; Discussion

NOTE: The content and format of the next three Child Development modules will be jointly described on the following pages since they are highly similar to each other. The student will encounter them as separate modules, however.

I. Prerequisites: Completion of CD-3. Concurrent with tutorial teaching experience.

II. Placement of Modules: CD-4: Junior, pre-professional year.

III. Estimated Time: (each module)
Student time--45 hours.
University faculty time--3 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of these modules is to provide students with further experiences of observing children at various age levels and in various situations to provide an objective basis for identifying further patterns of growth and development and to provide ideational anchorage for related reading. The general objectives of this module should prepare the student to do the following:

A. Compile observational data on children of several age levels in specified situations on several behavioral dimensions.

B. Derive principles of growth and development from data.

C. Contrast derived principles with other information and ideas obtained through reading and discussions.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Submit at least four derived principles accompanied by supporting observational data.

B. Tell whether specific statements about child development are or are not supported by observational data from these modules.

C. State wherein at least three reference sources concur and/or disagree with derived principles.

V. Modular Activity Flow Chart: See Figure 5.4.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:
   a. Have additional instruction prior to taking this module.

   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students will meet in small groups where they will be given packets of instructions directing them to perform certain tasks associated with the module. They will discuss the instructions until they are clear as to what they should do, and how they will divide and share responsibilities for completion of modular requirements. The instructions will: (a) specify the minimum observational coverage they should attain for a series of films of children at ages four, five, seven, nine, and eleven, and (b) describe the observational instruments and procedures to be used. (The films for these three modules should show approximately eight children of each age group in situations held standard across age groups through standard provision of materials and setting. For Module CD-4, for example, the children would have access to a variety of "acting out" materials such as dress-ups, puppets, miniature toys, masks, wigs, etc. For Module CD-5, the children would have access to only achievement-oriented materials such as beads to string, looms, puzzles, chess, Tinker Toys, etc. In a setting filmed for Module CD-6, there would be a "problem" or "task" situation requiring group decision-making and cooperation for solution such as a mural to paint, an out-of-reach pinata jammed with candy and toys, etc. Other kinds of situations could, of course, be substituted for those described here if they also presented the possibility of bringing about certain kinds of social interactions and involvements which would produce rich observational material.)

   The written materials supplied the students will direct them in making observations of such variables as handedness, motor coordination, physical activity, social interaction, activity choices, span of activity involvement, influence patterns, language usage, overt emotional expression, dependency, and aggression. The precise format for making closed observations would be described in the packet of instructions. Special films would need to be available in some instances for purposes of practice and establishing reliability prior to making the formal observations.

3. Upon completion of data collection, students will meet again in small groups to determine how the accumulated data can best be represented and communicated, and will continue to work together to accomplish this. They will consider together what child development principles could be justifiably inducted from the observations. Faculty participation would be desirable in these latter discussions.

4. Students will be given a bibliography and required reading in which they consider whether the ideas and empirical findings reported upon are or are not in agreement with the findings of

their own observations in these modules. Additional questions may also be posed to serve as "organizers" to the reading. The reading list would include comprehensive general sources such as Thompson's, Child Psychology.

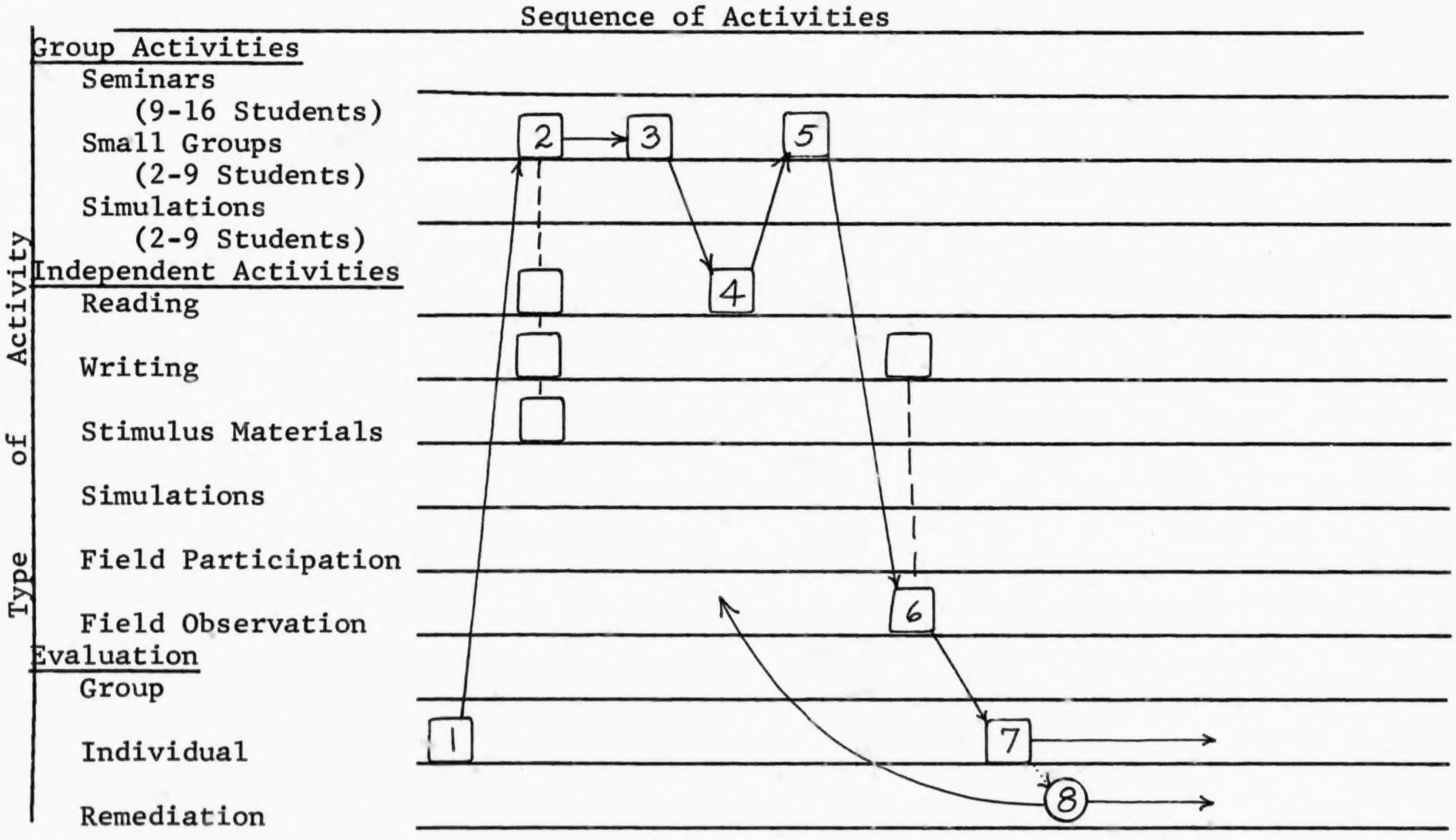
5. Students will meet in small groups with faculty participation to discuss their reading and to summarize the discrepancies between their own observations and the literature. Discussions at this point should also focus on issues such as the relationship between physical-motor development, affective development, and cognitive development.

6. The students will work individually to complete a portion of the field experience autoinstructional series which requires application of what was learned in this module series. It will involve: (a) making similar observations of the children being tutored and his/their classroom, (b) making written responses to a series of questions designed to lead the student to consider and evaluate these experiences.

7. Post-test to determine if the student should:
(a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

8. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CD-4, CD-5, CD-6
Figure 5.4


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7
8

CD-7: Resources for Child Development Inquiry

I. Prerequisites: Completion of CD-4, CD-5, and CD-6.

II. Placement of Module: Senior, pre-professional year.

III. Estimated Time: Student time--4 hours.
University faculty time--0 hours.
Clinical Professor and Clinical
Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to provide the student with skills and knowledge of resources necessary to independently pursue child development inquiry. The general objectives of this module should prepare the student to do the following:

A. Use appropriate published resource materials for child development inquiry.

B. Use other appropriate alternative resources (interviews, observation) for child development inquiry.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Locate specific information from appropriate child development resource materials.

B. Cite from provided listings alternative resources available for obtaining specific information or experience.

V. Modular Activity Flow Chart: See Figure 5.5.

VI. Description of Instructional Activity:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students will work individually in using autoinstructional learning materials wherein completion requires familiarity with the general content and reference aids included in primary sources such as: Review of Educational Research, Psychological Abstracts, Annual Review of Psychology, Child Development Abstracts.

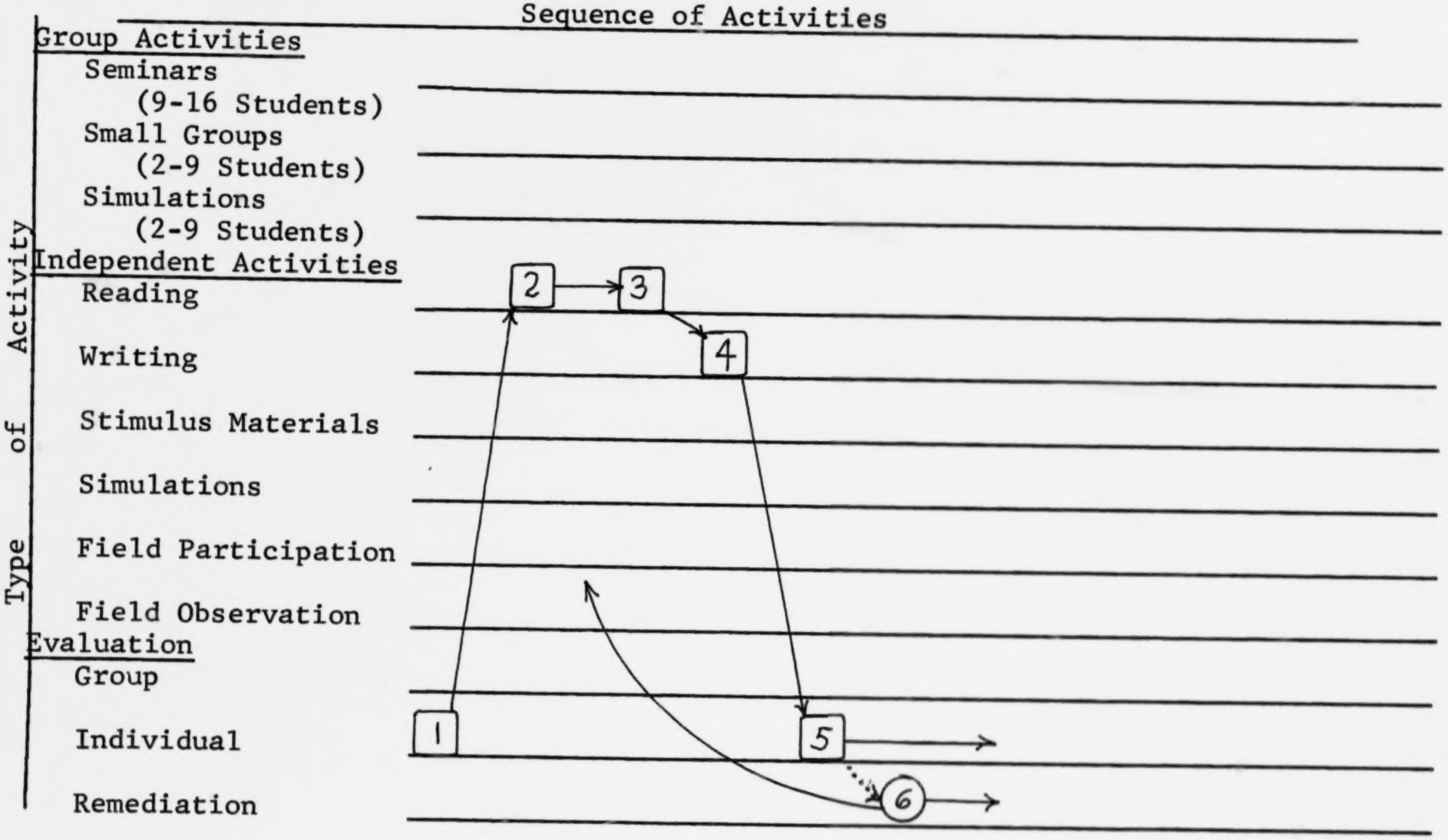
3. Students will be required to examine a prepared listing of persons in the university community (pediatrician, child guidance workers, teachers, etc.) whom they could arrange to interview to obtain specific information related to child development questions. Such a listing would also include settings (Headstart classrooms, recreation programs, etc.) in which observations of children or participation might be arranged for specific purposes.

4. Students would complete worksheets involving matching between inquiry topics and resources which could be utilized. These would be designed to increase awareness of both the diversity of possible kinds of inquiry and available resources.

5. Post-test to determine if the student should:
(a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

6. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CD-7
Figure 5.5


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

CD-8: Theory and Empirical Investigation in Child Development

I. Prerequisites: Completion of CD-7, Concurrent with SCF-6.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--10 hours.
University faculty time--2 hours.
Clinical Professor and Clinical
Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to provide the students with introductory knowledge concerning theory and research in child development. The general objectives of this module should prepare the student to do the following:

A. Recognize the role that theory plays in behavioral explanation and empirical investigation.

B. Identify methods and some criterion standards for evaluation of research.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Cite at least three ways in which an adequate theory facilitates general thinking about child development data and stimulates empirical investigation.

B. Identify for a given research report which of a set of posed statements regarding results and implications of results are justified in terms of the kind of control, sampling, analyses, etc., that were reported.

C. Differentiate between given examples of testable hypotheses and non-testable hypotheses.

V. Modular Activity Flow Chart: See Figure 5.6.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students will work individually in reading a summary assignment of a statement describing: (a) the role of theory in integrating observations of natural phenomena and in suggest-

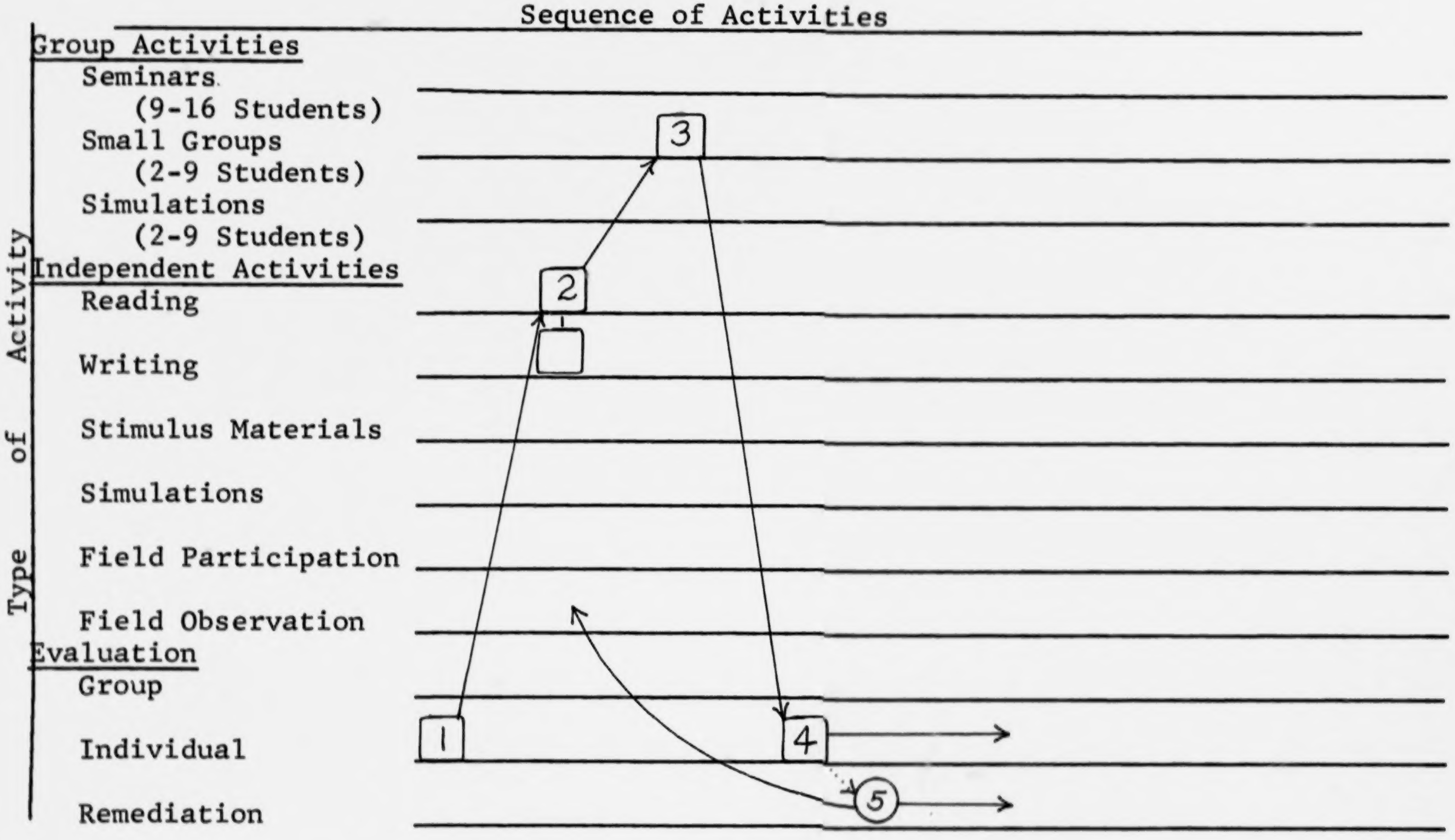
ing the next steps in systematic inquiry, and (b) the characteristics of theories in regard to scope, specificity, etc. A series of questions would then direct the students into considering the kind of implicit theorizing and hypotheses testing he engages in routinely in his interactions with others, i.e., the child he tutors. Students will continue reading in materials designed to consider the relationship between theory and empirical investigation. (It is proposed that special materials be prepared for the precise purposes of this module. For example, a facetious mock theory of development could be described and further developed to demonstrate the generation of testable hypotheses. The methodological procedure for undertaking investigation of these hypotheses might then be examined through either additional expository materials,or perhaps here is the potential appeal of a satirical situation as a substitute for the expected lack of intrinsic involvement in these issues for most students at this stage. Through posing a mock theory and then using hypotheses derived from it to focus on the typical kind of methodological errors which prevent adequate examination of questions, it is felt that students could gain a general sense of what is involved in evaluating "real" research efforts.)

3. A collection of amusing "grabbers" from the past actual educational research efforts could be collected and provided to the students for reading and analysis to further exemplify the factors which lead to inappropriate conclusions from research efforts. Students will meet in seminar or small groups to discuss their reading.

4. Post-test to determine if the student should:
   (a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

5. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CD-8
Figure 5.6


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5

CD-9: Reinforcement Theory

I. Prerequisites: Completion of CD-8. Concurrent with TTP-12 and teaching experience in the public schools.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--27 hours.
University faculty time--4 hours per group of 4 students.
Clinical Professor and Clinical Teacher time--2 hours.

IV. Operational Objectives: The purpose of the module is to develop the ability to describe several factors which can be manipulated to influence the behavior of another person, to practice using these influences, and to discuss their positive values and possible limitations. The general objectives of this module should prepare the student to do the following:

A. Define a number of technical terms, including: reinforcement contingent, shaping, fading, secondary reinforcement, discriminative stimulus, intermittent reinforcement, extinction, etc.

B. Describe the manner in which different types of reinforcement (physical, social, intrinsic, etc.), can be used in influencing the observable behavior of a pupil.

C. Describe events observed in classrooms in terms of reinforcement theories as described by Skinner and others.

D. Demonstrate the use of reinforcement techniques in both simulated and real interactions with school children.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Given a description of each of three different children, state whether physical, social or intrinsic reinforcements would be most appropriate (likely to be effective) with each child, and describe the manner and timing for each.

B. While observing the interaction of a teacher and class (live or mediated), record the interaction using procedures learned in preceding modules and describe the sequence of events in terms of schedules of reinforcement, types of reinforcers, extinction, etc.

C. Demonstrate the use of behavior management techniques in both role-playing situations (other students playing the roles of pupils) and in tutorial/teaching situations. Show the use of similar principles for modifying behavior maladaptive to school learning as well as "healthy" behavior needing further development.

V. Modular Activity Flow Chart: See Figure 5.7.

VI. Descriptions of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students would begin the module in groups of four, all of whom would stay together until completion of the post-test situation. Students would begin with an orientation seminar meeting with an instructor. A general introduction to the content, procedures, and purpose of the module would be followed by a discussion of topics that commonly disturb student teachers when the deliberate control of another's behavior is proposed:

   1. Ethical considerations and use of aversive methods.
   2. The "dehumanization" of certain forms of manipulation.
   3. The issue of creativity vs. conformity.
   4. The balances between pupil freedom and restrictions.
   5. The moral right of a person to deliberately change another.

3. Working alone with programmed instructional materials which are coordinated with audio/visual displays, the students would learn and practice the basic concepts and terminology. They would observe and analyze case studies and films showing both examples and non-examples of the systematic control of contingencies in teacher-pupil interactions.

4. In groups of four, the students would role play situations designed to allow for the control of pupil behavior through different types of reinforcement and schedules. The role playing would be recorded on video tape for self-analysis (and subsequent analysis by an instructor) using criteria provided.

5. Working in pairs, each student would plan and conduct reinforcement schedules with his tutorial pupil to produce a desired change in the pupil's behavior. The second student would record and take notes on the interaction. Their report and conclusions would be analyzed by the other group members to be sure each student was able to demonstrate the

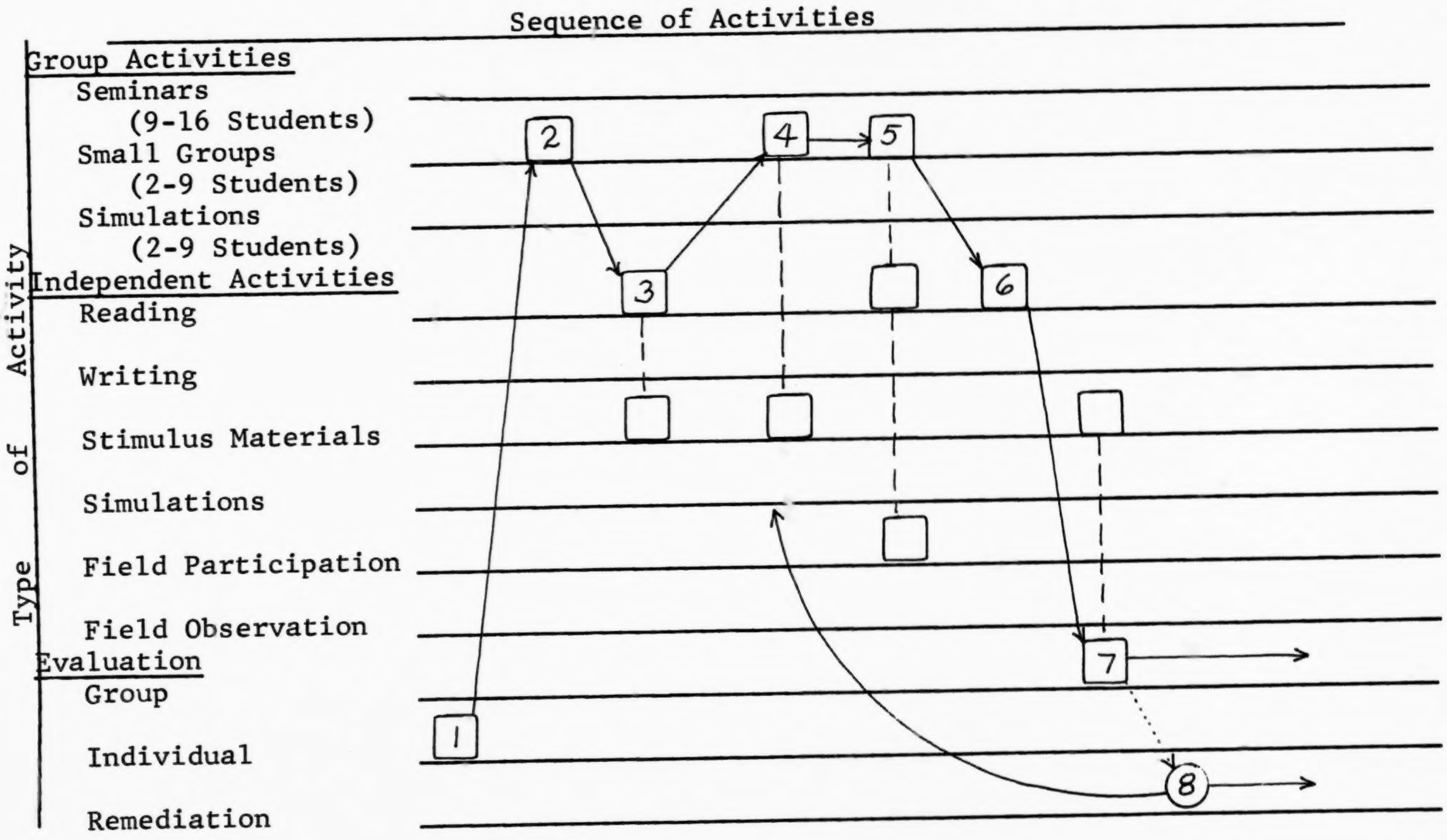
use of reinforcement/control techniques.

6. Students will read independently selections from a bibliography furnished to them of books and periodical literature discussing issues involved in utilizing behavior modification-reinforcement theory in educational practice.

7. The post-test would consist of a final seminar/workshop for between 8-12 students. They would be asked to present their recorded teaching episodes and analyses, and to conduct short role-playing situations with the instructor participating. Criteria would be furnished for the self-evaluation of students with the instructor's assistance.

8. If the post-test indicated a need to repeat certain aspects of the module, or engage in other remedial work, this would be determined in a remediation conference with a professional staff member.

Modular Flow Chart CD-9
Figure 5.7


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7
8

CD-10: Phenomenological Theory

I. Prerequisites: Completion of CD-8. Concurrent with teaching experience.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--42 hours.
University faculty time--8 hours.
Clinical Professor and Clinical
Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the student's ability to consider observed behavior from a phenomenological frame of reference. The general objectives of this module should prepare the student to do the following:

A. Generate phenomenological explanations of given behavioral episodes and recognize whether other's explanations are phenomenological in orientation.

B. Use relevant techniques/instruments for obtaining data for inferring another's internal frame of reference.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Define terms such as self-concept, self-report, social desirability, perceptual field, etc.

B. Name at least two instruments or techniques for obtaining data,respectively, via self-report, via observed behavior, via projective techniques.

V. Modular Activity Flow Chart: See Figure 5.8.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students will view a film in which a given event is portrayed as being perceived by several people in quite different terms according to their diverse frames of reference. An example of such a film would be **In the Eye of the Beholder**.

3. Students will read assigned materials summarizing the pheno-

menological position in regard to behavioral explanation. Examples of such reading would be the 1962 ASCD yearbook, *Perceiving, Behaving, Becoming*; Combs and Snygg's *Individual Behavior*; McCandless' *Children: Behavior and Development*, (chapter 6--"The Self-Concept").

4. Students will meet in small groups to discuss phenomenological theory in terms of its present relationship to their everyday functioning with others (including the children in their field work), the problems they encounter in trying to infer others' frames of reference, etc.

5. Students will meet in small groups where they will be given packets of instructions directing them to perform certain tasks associated with the module. They will discuss the instructions until they are clear as to what they should do. They will then view a series of films from which they will collect data relevant to inferring another's self-system from behavior (or vice-versa).

The following formats are suggested as possible approaches to be utilized for these purposes.

a. Students would view a series of video tapes and would then attempt to respond to a self-report (such as the Gordon [1967, p. 56]..."How I see Myself") as they predict the observed child would do. They could then be given the child's actual self-report, and could compare the two and determine the correlation between them.

b. Students could be given a completed self-report form for a child of a given age, sex, grade and social class, and would be asked to predict the relative frequency of certain types of behaviors. (For example, they could try to predict the social interaction for a ten year old boy who reports himself as "I don't want the girls to like me" and "I'm smarter than most of the others" as compared to a boy of the same age who reports himself as "I feel at ease, comfortable inside", "I want the girls to like me", "I'm smarter than most of the others." The social interaction scales used in Module CD-4,5,6, could be re-employed here to get behavioral counts upon which comparisons could be made.

c. Students (in small groups) could view a film in which a child is shown in intense social interaction. After being shown a brief portion, the film would be stopped and students asked to generate as many different plausible statements of the ways the child might be perceiving the situation as they can within the next ten minute period. They could then be shown an additional brief segment of the same on-going situation, and would be asked to revise their list as would seem warranted by what they saw. This sequence of observations followed by revision of inference would continue through several brief segments.

d. Students could view a series of behavioral episodes in completely open-ended fashion without making notes or counts of what is seen. They could then be asked to mark on a numbered continuum the rating between extremes such as "able-unable",the child's perceptions of himself according to their judgment of his behavior on the viewed situations. Comparisons could then be made between judgments made by each observer.

Some additional measures/materials could be collected from the children portrayed in the films used above to be made available for students' comparisons. These might include such measures as the Meyerowitz index (1962, p. 208), Kilpatrick and Cantril self-anchoring scale (1960), children's own writing products, responses to CAT cards, etc.

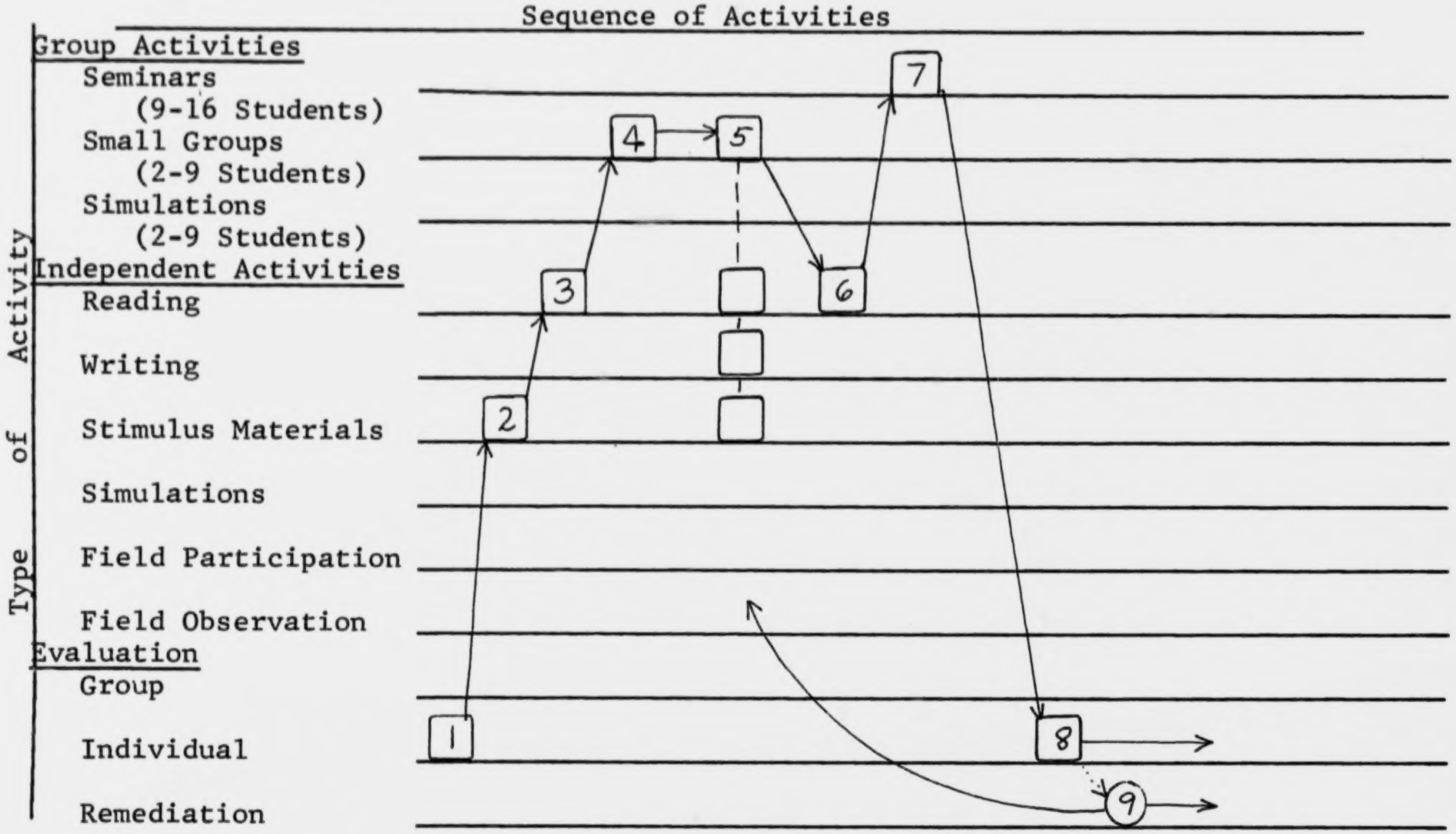
6. Students would read: (a) general research discussions (might include readings such as Combs and Soper's, "The Self, Its Derivative terms and Research" and Gordon's, "Assessing the Child's Personality" in Studying the Child in School, (b) selected research reports (might include readings such as Meyerowitz's "Self-Derogations in Young Retardates and Special Class Placement"), and (c) other general reading (might include books such as Axline's, Dibs in Search of Self and Ginott's, Between Parent and Child).

7. Students would meet in seminar or small group discussions with faculty to consider such topics as the utility for teaching situations of using internal vs. external frames of reference in considering behavior, the utility of making global vs. molecular observations, the degree to which phenomenological theory generates testable hypotheses, etc. Discussion could also include a comparison of the contributions of theories studied to date by the involved students.

8. Post-test to determine if the student should:
(a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

9. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CD-10
Figure 5.8


Sequence of Activities
Type of Activity
Group Activities
Seminars (9-16 Students)
Small Groups (2-9 Students)
Simulations (2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7
8
9

CD-11: Cognitive Theory-Piaget

I. Prerequisites: Completion of Module CD-8. Concurrent with teaching experience.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--44 hours.
University faculty time--8 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to aid the student in understanding the theory of cognitive development proposed by Piaget. The general objectives of this module should prepare the student to do the following:

A. Recognize the trends of cognitive development, i.e., the sequential changes that take place in conceptual development, the scope of conceptual abilities at each level, etc.

B. Explain Piaget's conceptions of how these changes occur, appropriately utilizing such terms as object, permanence, reversibility, assimilation, accommodation, etc.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Assess a given child's cognitive operational level using at least three of Piaget's interview task situations.

B. State at least three ways in which a child's cognitive stage as conceptualized by Piaget might guide the teacher in planning for social studies activities.

V. Modular Activity Flow Chart: See Figure 5.9.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students will read an article or selection giving an overview of Piaget's theories and investigations. An example of such an article might be Elkind's "Giant in the Nursery--Jean Piaget" (New York Times Magazine, May 26, 1968, p. 25).

3. Students will view filmed exemplars of the following:

   a. Sensori-Motor Period Development. (Examples of such films are Marine and Formanck's, The Intellectual Development of Babies.)

   b. Transition from Preoperational to Concrete Operational Thought. Video tapes of interviews with children ranging in age from four through twelve might be viewed to illustrate, for example, changes in conservation of liquid, projection of space, projection of shadow, causality, animism.

4. Students will meet in small groups to discuss each of the filmed exemplars, and will list the behavioral differences noted between types of performance.

5. Students will be required to read selections which would serve to further explain change processed in children's conceptual development. (An example of such reading might be Piaget's, Six Psychological Studies. Students will also be given an annotated bibliography from which additional reading may be selected.)

6. Students will meet in small groups or seminars to further discuss, with faculty participation, their lists of behavioral differences indicating changes in functional processes. Piaget's concepts of reversibility, accommodation, assimilation could then be further developed as explanatory of transition from one stage to another.

7. Students will meet in small groups, and will be given packets of instructions directing them to replicate some of Piaget's experiments with children. They will discuss the instructions until they are clear as to what they should do, and how they wish to divide and share responsibility for the completion of assigned tasks.

8. They will be directed to interview children of different ages on some of Piaget's tasks (such as conservation of liquid quantity) and to record the data necessary for evaluation. Explicit formats will be included to use as guides for interviews, and the students will have the opportunity to role-play the interview situations if they wish. The packets will include additional data which has been collected by other students on similar interviews allowing them to combine the observations and use statistical inference to arrive at some conclusions regarding developmental change. The findings and comments of the group will be submitted on a form included in the packet for this purpose.

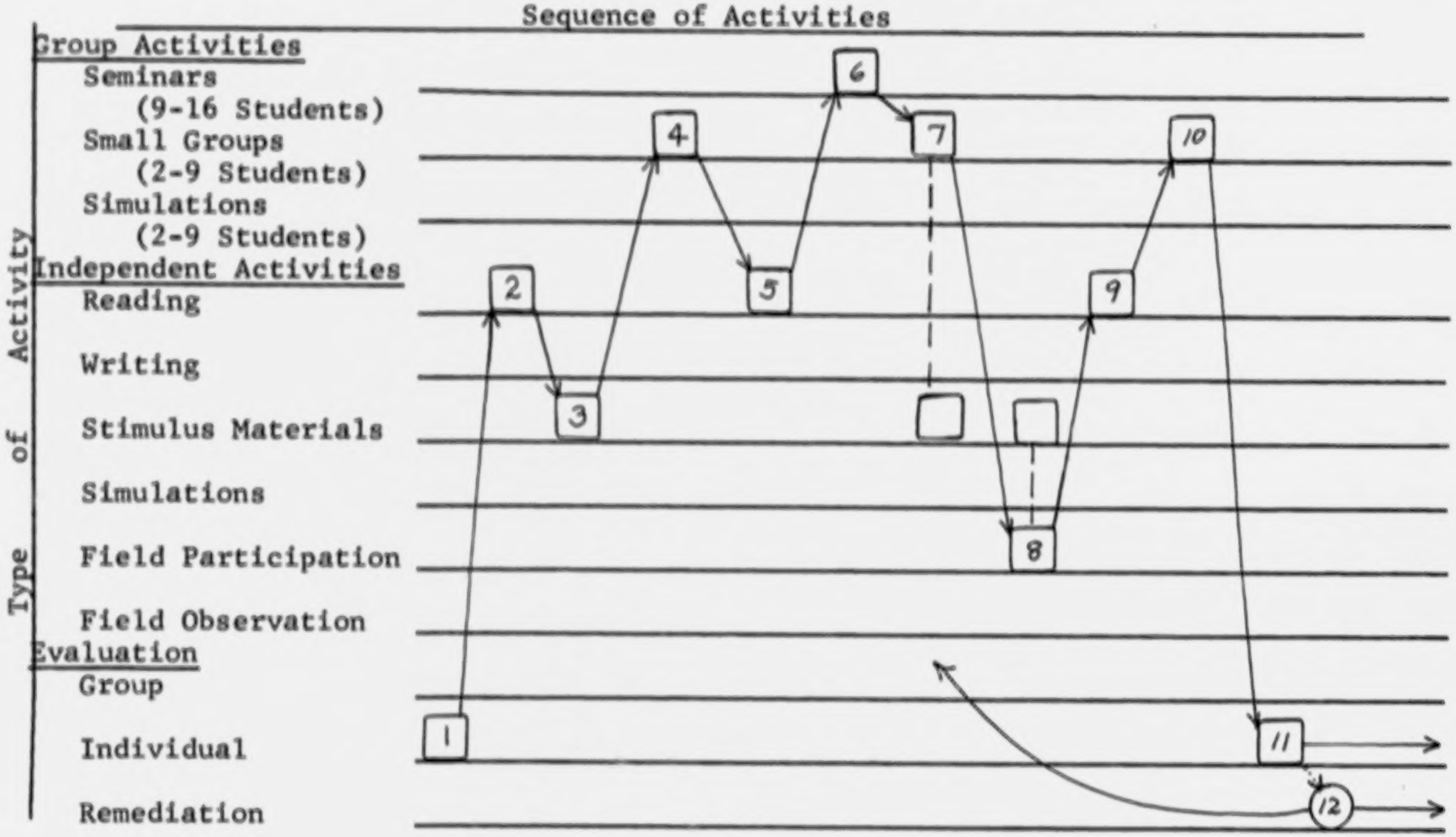
9. Students will read selected research reports and discussions of the implications of Piagetian theory for educational practice. (An example of such reading might be Jenning's, "Jean Piaget: Notes on Learning" in Saturday Review, May 20, 1967, P. 81.)

10. Students will meet with faculty in small groups to discuss such issues as advisability of attempting cognitive acceleration, implications of Piagetian ideas for social studies curriculum, moral education, etc. Discussion could also include a comparison of the contributions of theories studied to date by the involved students.

11. Post-test to determine if the student should:
(a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

12. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CD-11
Figure 5.9


Sequence of Activities
Type of Activity
Group Activities
Seminars (9-16 Students)
Small Groups (2-9 Students)
Simulations (2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7
8
9
10
11
12

CD-12: Psychoanalytic Theory

I. Prerequisites: Completion of CD-8. Concurrent with teaching experience.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--28 hours.
University faculty time--4 hours.
Clinical Professor and Clinical
Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to aid students in developing the ability to consider observed behavior from a psychoanalytic frame of reference (especially as conceived by Erikson). The general objectives of this module should prepare the student to do the following:

A. Recognize the phases through which a child must progress to achieve healthy personality development (according to Erikson).

B. Describe the nature of the resolution to be achieved at each of the Eriksonian stages.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Identify behaviors that could be inferred as evidence of completion of a given Eriksonian phase.

B. State relevance of the following psychoanalytic terms to Eriksonian phase development: libidinal energy, id, superego, ego, Oedipal conflicts, infantile sexuality, latency, unconscious motivation, identification.

V. Modular Activity Flow Chart: See Figure 5.10.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students will read: (a) a brief summary of psychoanalytic theory as it relates to child development (such as pp. 14-16 of Thompson's *Child Development*), and (b) other basic materials (such as "Eight Stages of Man" from Erikson's *Childhood and Society*).

3. Students will meet in small groups or seminars with faculty to discuss the characteristics of the Erikson phases and the relationship between these phases and Freudian concepts. A film such as Four Students could also be used at this juncture to provide discussion focus for phase development.

4. Students working individually or in small groups will be given packets of materials which will include instructions and their own written descriptions prepared from the open observations in Module CD-2. They will be directed to read through their descriptions, and will be asked to respond to a series of questions leading them to consider the phase levels of the described children and whether, in general, the psychoanalytic theory offers useful explanations of the behaviors. (The films used in Module CD-2 should also be available for reviewing if desired.) Students will prepare and submit a general statement describing wherein they found the psychoanalytic theory explanatory of the children's behavior.

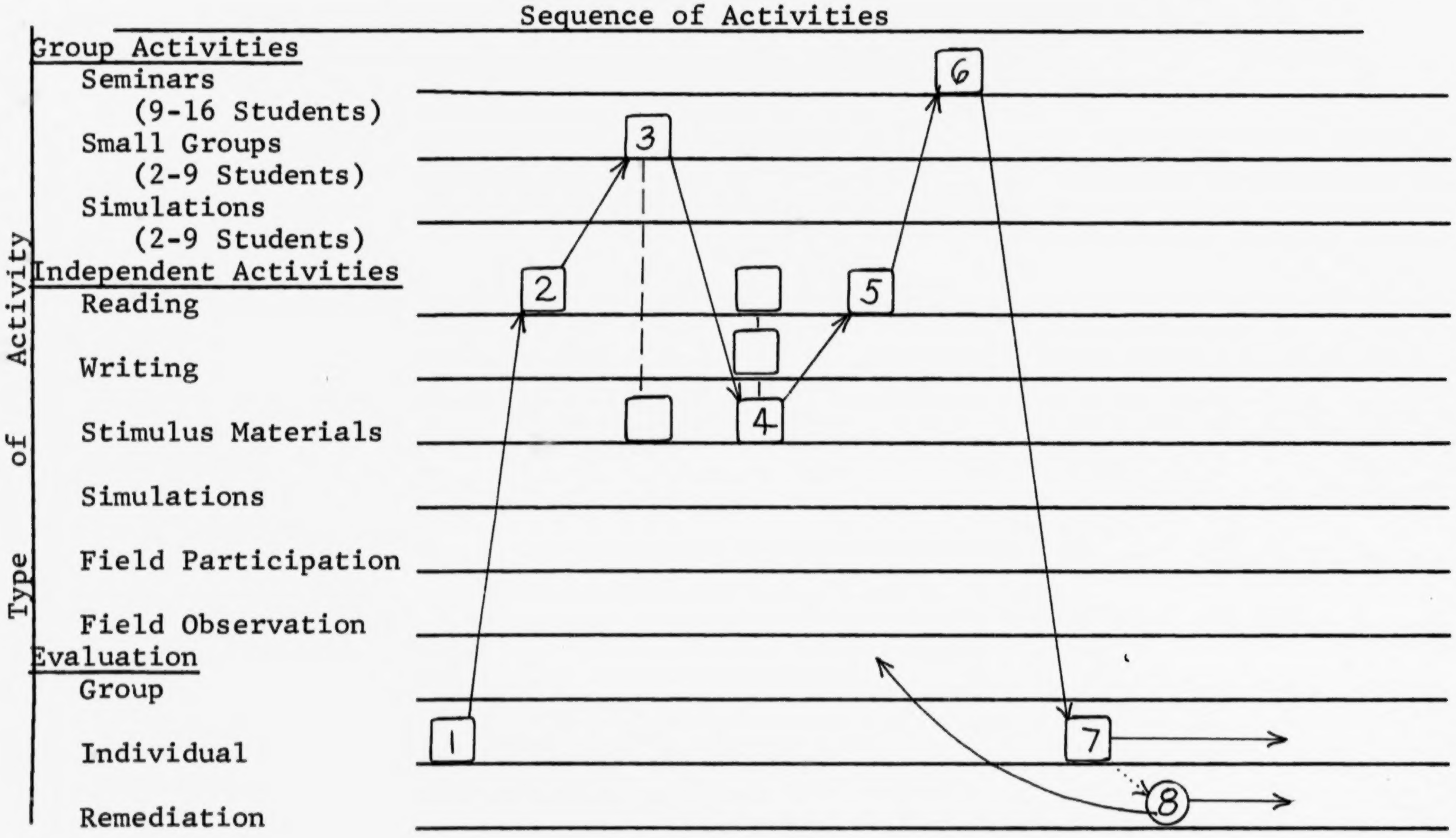
5. Students will do reading from an annotated list of related articles and books. Accompanying the reading list could be a statement briefly summarizing the influence psychoanalytic theory has had on the formulation of several different approaches to behavioral explanation and investigation. With this kind of introduction the reading list might then include such diverse listings as the Maier summary of Sears' work; White's "Competence and Psychosexual Stages of Development"; and Kessler's Psychopathology in Children.

6. Students will meet in small groups or seminars with faculty to discuss the potential contribution of psychoanalytic theory to education. The following kinds of questions could be considered: Of what significance is the concept of "unconscious motivation" to classroom concerns? Can testable hypotheses about children's behavior be generated from Erikson's theory? Discussion could also include a comparison of the contributions of the theories studied to date by the involved students.

7. Post-test to determine if the student should:
(a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

8. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CD-12
Figure 5.10


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7
8

CD-13: Longitudinal Studies

I. Prerequisites: Completion of CD-9, CD-10, CD-11, CD-12.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--20 hours.
University faculty time--3 hours.
Clinical Professor and Clinical
Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to acquaint the students with the findings of some major longitudinal studies and with the resulting conceptions about children's growth and development. The general objectives of this module should prepare the student to do the following:

A. Recognize the diverse ways in which life experience affects growth and development.

B. Contrast "common sense" concepts of development against appropriate empirical evidence.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Cite findings of at least three research studies which investigated the effect of early childhood experience on later cognitive functioning.

B. State at least three different respects in which research findings support the notion that teacher's expectancies influence students' classroom behavior and performance.

V. Modular Activity Flow Chart: See Figure 5.11.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students will meet in small groups where they will be given reading lists and requirements for minimum coverage. They will decide together which portions each individual will read and report upon for the edification of the others. The selections will focus on atheoretical findings, mostly

of longitudinal studies on topics such as effects of early environment and experience, fixed vs. modifiable intelligence, stability and change in personality characteristics, effects of nutrition on physical and intellectual growth, effect of expectancy on performance, etc.

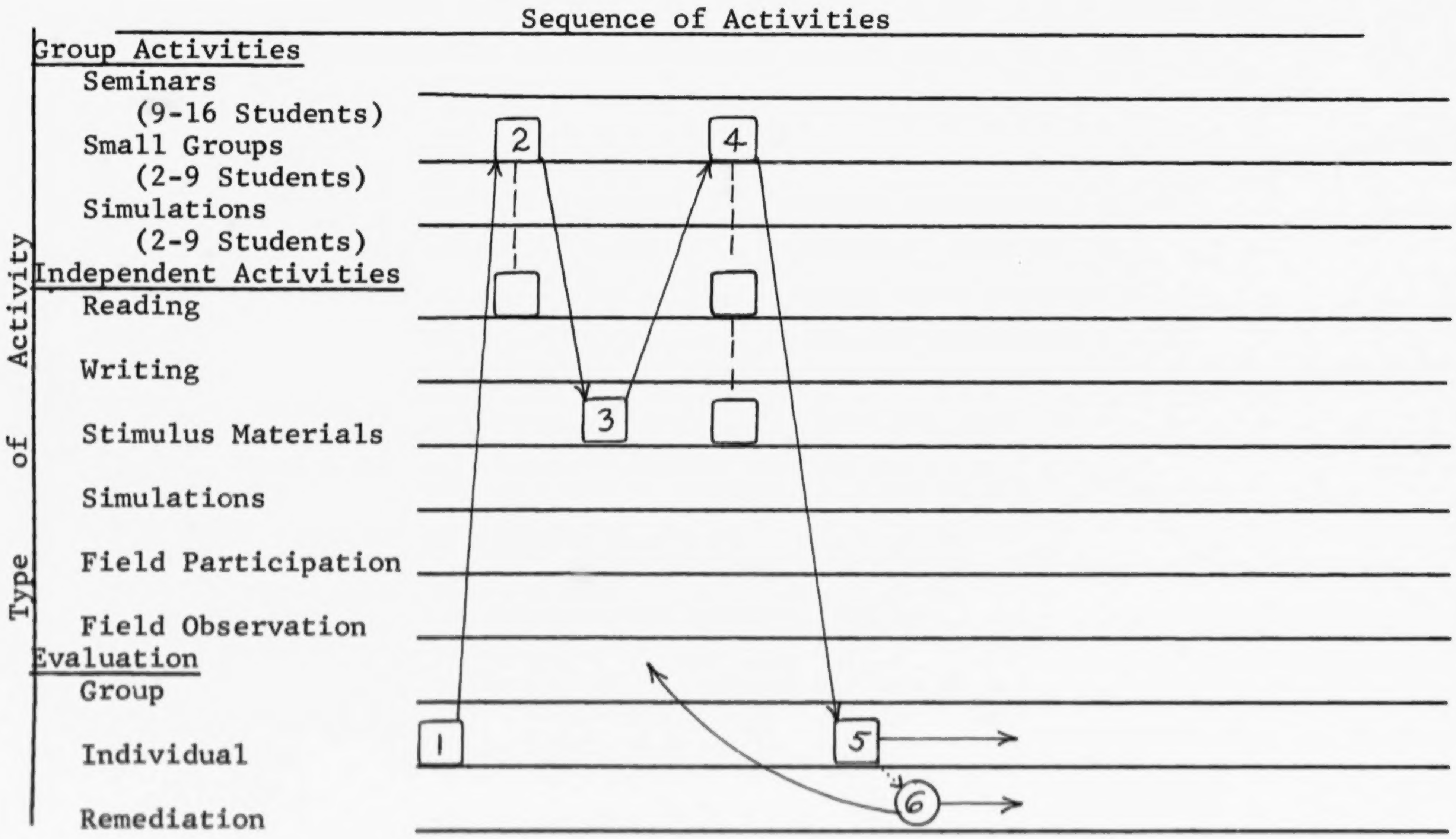
3. Students will view films such as Growth Failure and Maternal Deprivation which portray effects of early experience. Also appropriate would be the 1968 programs on early childhood produced for the CBS television series, 21st Century.

4. Students would meet in small groups to discuss the films and to share their individual reading findings. Faculty would participate in further discussion of topics such as the relationship between research studies and current government programs such as Operation Headstart, Parent Child Centers, the issue of "critical stages", the changing conceptions of development, the influence of school environment on development, etc.

5. Post-test to determine if the student should:
(a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

6. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart CD-13
Figure 5.11


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

CHAPTER 6

TEACHING THEORY AND PRACTICE COMPONENT

Rationale

Introduction

It is assumed that teaching is a decision-making process by which the teacher interacts with pupils, materials, subject matter content, and the school administration to achieve certain results. This component of The Model Teacher Preparation Program focuses on a set of skills needed to make teaching decisions (to resolve problems arising in the classroom). As the student teacher progresses through the instructional materials described here, the seemingly independent nature of these activities from other components of the program will gradually vanish. The design of this component assumes the existence of such "supporting systems" as an instructional resources center, an information processing system to keep all participants informed, a program to keep students in contact with public school children, integrating seminars and opportunities for student guidance and counseling.

Rationale for the Component

What should professional teachers know about the interaction of the instructional behavior of teachers and pupils in the classroom? The result of much philosophizing and some research have still left considerable latitude for the designer of a teacher preparation program. Although there is much that is not known about effective teaching and about programs for the preparation of effective teachers, there is not a complete absence of well-grounded information on which to build a program for training teachers that will be more effective than most of the existing programs. Research on teaching and on several other complex human activities (notably decision-making and problem solving) suggests means by which both the content and the processes of a teacher preparation program can be improved. The instructional modules described in this component are intended to provide a portion of such a program. This portion deals with the behavior of teachers as they interact with pupils and materials, and their objectives for the outcomes of their instruction.

Teaching as a Decision-making Process

Teaching can be viewed as a process wherein teachers examine many aspects of their environment and its possible outcomes, and establish a course of action for themselves and their pupils. Teachers make plans for both long and short range activities--for the global objectives of education as well as the moment-by-moment decisions--as they interact with their pupils in a dynamic way.

The analysis of decision-making processes presented below, has been drawn from research and theory in the areas of concept learning, problem solving behavior, human information processing, and the influence of plans and intentions on behavior. Three phases of decision-making are suggested by the diagram in Figure 6.1.

Phase 1: In the first or introductory phase of decision-making, the teacher is shown moving through some previously selected sets of behaviors, having already committed himself to a plan of action. In the figure, the teacher is shown with the pupil who is ultimately the focal point of all interest in educational systems. As the teacher proceeds according to plan, he has certain intentions for his own behavior and corresponding expectations or predictions about the responses from his environment, particularly the response of the pupil. At the same time that he is carrying out his plans, his sensitivities provide him with perceptions of the actual responses from his environment and pupil. As long as his expectations and perceptions do not differ more than some tolerable amount, the previously established plan can still be considered applicable, and no further decisions need to be made. However, the longer he continues to follow his plan, the more likely it is that a significant discrepancy will arise between his expectations for, and his perceptions of his environment. Finally, as if some threshold of dissonance has been exceeded, the teacher will experience the need for formulating a new plan of action--making new decisions. Thus, in the first phase of decision-making, the teacher is acting under conditions where his expectations are compared with his perceptions. When some critical difference between these two phenomena is experienced, action stops, figuratively speaking, and the first phase of decision-making terminates.

Phase 2: In the second phase, the teacher must consider a complexity of elements in the environment and the alternative pathways that are open to him as potential means to his goals. At this moment, his intention is to establish a new plan of action that will optimize his own and his pupil's gains, and minimize the risks and losses as the interaction continues.

In his examination of the critical factors affecting his decisions, the teacher will consider at least four major classes of events:

a. Individually or as a group, the pupil, as a representative of a particular culture, has features that are common to all children and other features that are unique to the time and setting. The teacher will need to have a wide ranging knowledge of children, and the sensitivity to observe the child with respect to his background, potentialities and current needs.

b. To establish the goals of education in both content and process, the teacher must have an extensive knowledge of the major subject areas the pupil is expected to learn, the materials that are available for the development of subject matter skills, and a variety of content-related skills for the diagnosis, presentation and evaluation of these subjects.

c. The teacher's own abilities and attitudes (his personal strengths and limitations) including particularly his competence to interact in a wide variety of ways to accomplish the many goals of education for the many different pupils with whom he deals.

d. The administrative and community expectations for the school, and the school's limitations on the teacher and pupils.

Knowledge of the immediate influence of each of these factors will lead the teacher to consider a number of possible actions open to him. Because of his own limited background, only a fraction of the total possible alternatives are conceivable to him at the time of decision-making. A major emphasis of this training program is to either deliberately and dramatically increase the number of alternatives available to the teacher within his own "conceptual system", or to increase the possibilities he could conceive as potential choices. For each conceivable alternative, he will extrapolate a chain of expected activities to its predicted outcome as though he were saying, "If activity-chain-#1, then outcome-#1." This provides the decision-maker with a number of alternative outcomes which can be weighed in terms of the benefits and risks or losses for himself and his pupil. Upon selecting the most favorable set of anticipated outcomes, he will formulate a new plan to carry out the most desirable activities, and move forward again with a new set of intentions and expectations.

Phase 3: This final phase of the decision-making process is basically the same as the first with the exception that it is now clear he is comparing his perceptions, as he moves along this new path, with the factors he considered at the time the decision was made. Now he is acquiring information to be used in checking and improving the validity of his concepts, principles and weighting systems. When he next must make a decision, he will have a broader experiential base on which to predict the outcomes of the alternative actions he will consider.

In considering Figure 6.1 as a model for a teacher's decision-making activities, it should be emphasized that each element in the figure is only intended to represent one of the factors in a highly simplified form. For example, the sketch of the child represents the complex set of factors that enter the teacher's field of concern through the learner, including; the developmental characteristics of children, the group dynamics of the classroom when it is filled with many different children, the familial and ethnic patterns of behavior in which the children function outside the classroom, and many others. Similarly, the single weighting shown at the end-point of the alternative actions is intended to represent a complex analysis of many inter-related outcomes. Thus, the figure includes only the major classes of factors affecting the teacher's decisions and represents these in simplified form.

At the same time that it is important to consider factors that will assist student-teachers in becoming increasingly flexible in their classroom behavior, it is also important to examine other factors that may tend to restrict or eliminate the kind of "searching behavior" portrayed in Figure 6.1. As the teacher experiences fear or anxiety, fatigue or strong administrative restrictions, the searching behavior of teachers as they consider alternatives will be sharply curtailed. Through the experiences provided in the Professional Sensitivity Training Component, the student teachers will begin to recognize and deal with the effect of these restrictive forces, and develop coping strategies to minimize the influence of these erosive factors.

Designing a Teacher Training Program

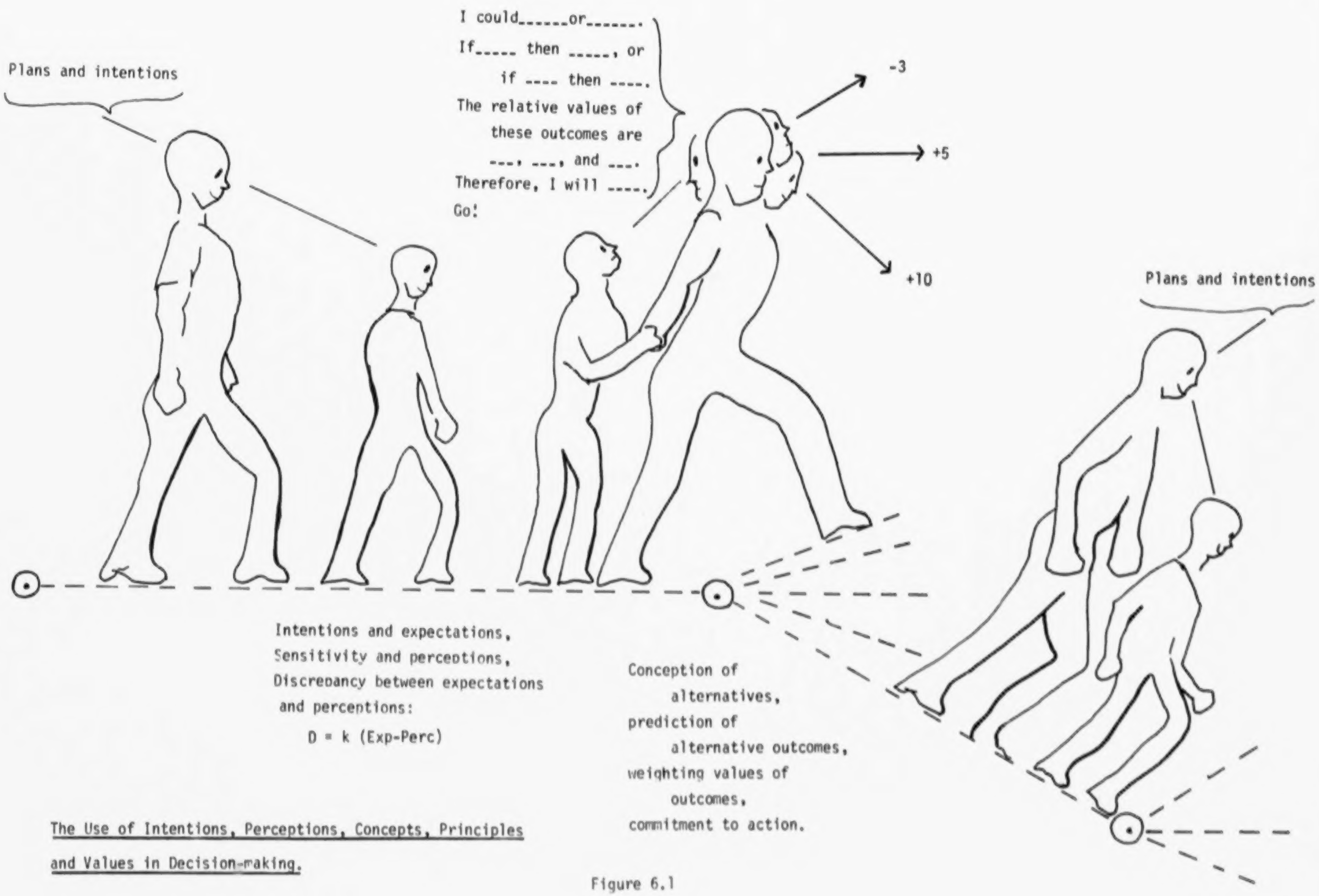
This model of teacher decision-making behavior has been useful in planning a training program to assist the pre-professional in preparing for teaching.

Consider a new teacher about to begin a new lesson on arithmetic with a new class. How shall he begin? Although there are a tremendous number of alternative actions open to him, his experience and personal characteristics drastically limit the number of alternatives of which he can conceive. There would be only a limited number of things that he would know how to do. One of the main functions of this teacher training program is to provide him with both (a) a theoretical framework for considering the widest possible range of behavioral alternatives that are open to him, and (b) deliberately planned opportunities to practice a significant number of these alternatives in widely differing situations. These practice experiences can be provided in a manner that will repeatedly emphasize the power and usefulness of a broad theoretical framework on which any teaching decision can be based.

There were two relatively unexpected conclusions reached from an analysis of this model and its implications for teacher training: (a) the teaching behavior of "searching-for-alternatives" is seldom practiced and directly reinforced in teacher training programs, and (b) few opportunities are generally provided for practicing the behavior of "extrapolating plans and weighting alternative outcomes" under conditions that provide feedback to improve the quality of this behavior. Certain features of the instructional modules to be described have been deliberately designed to provide for practice with feedback on these two types of behavior as well as for the other types of knowledge, skills, and attitudes the teacher will be expected to acquire.

The Teaching Theory and Practice Component Organization

A training program has been designed using this model of teaching as a decision-making process. Furthermore, the contents and sequence of this program have been adapted from the stages and conditions of


Plans and intentions
I could______or______.
If_____ then _____, or
if ____ then ____.
The relative values of
these outcomes are
___, ___, and ___.
Therefore, I will ____.
Go!
-3
+5
+10
Plans and intentions
Intentions and expectations,
Sensitivity and perceptions,
Discrepancy between expectations
and perceptions:
D = k (Exp-Perc)
Conception of
alternatives,
prediction of
alternative outcomes,
weighting values of
outcomes,
commitment to action.

The Use of Intentions, Perceptions, Concepts, Principles and Values in Decision-making.

Figure 6.1

learning proposed by Gagne (47). In order to function in the manner illustrated by the model, the teacher will need to make many difficult discriminations. From these discriminations, he will formulate many concepts about what is happening around him and what he in turn can do. He will extrapolate these concepts to possible outcomes (Gagne's principles according to an "If ---, then ---." relationship), and as he works to combine these elements in novel ways to accomplish his objectives, he will engage in a form of "problem solving" through making successive decisions to optimize progress toward these goals.

As student-teachers move through the modules which make up this Teaching Theory and Practice Component, following the above same process, they will begin by learning to make finer and finer discriminations about the activities of teaching and end with the actual practice of all the elements depicted in the model under conditions that will provide feedback on each facet of the teacher-pupil interaction.

While it is generally agreed that the teacher is the principle factor influencing pupil learning, it is the amount and style of his teaching behavior that determines his influence. Different teachers affect pupils in different ways because of variations in their interactional behavior. The pupil can only know about the teacher's intentions and purposes through observing his behavior, i.e., the pupil can only perceive the "what" and the "how" of the teacher's behavior, while the "why" remains invisible. Thus, teachers must learn to act in ways that have been shown to be associated with high pupil achievement and positive attitudes toward learning. It is not enough for the teacher to have high goals and good intentions if he does not know how to act so that the pupils interpret his behavior as being related to those lofty ideals. It is for this reason that the central efforts of this component are focused on the behavior of teachers as they interact with pupils and subject materials to produce certain outcomes. As the modules follow, one after another, and build upon the competencies developed in other components, the student-teacher will be asked to do the following:

1. Discriminate between increasingly finer differences between teacher behaviors as displayed by other teachers.

2. Practice the production of samples from each class of teaching behavior in order to develop a wide repertory of available behaviors from which to draw the appropriate behavior for the immediate situation and decision.

3. Examine the range of possible outcomes of education (objectives) in terms of the skills, knowledge, and attitudes of the learners, and prepare measurement techniques to determine the degree to which these objectives are achieved.

4. Learn to interpret and apply the results of research to the effectiveness of different strategies of teaching in achieving specific outcomes.

5. Based on an increased understanding of the nature and needs of children and the subject matter taught in elementary schools, practice the decision-making skill of "searching" through his own repertory of potential behaviors for that strategy that would be most effective for particular pupils and specific outcomes.

TTP-1: Major Classes of Teacher Behavior

I. Prerequisites: Completion of CD-1 (Making open observations). Completion of PST-1. Concurrent with initial tutorial relationship with children in the public school, where the primary emphasis is on establishing a supportive/trusting relationship with minimal effort on extensive diagnostic and remedial work.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--8 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to discriminate between a few basic classes of teacher behavior. The general objectives of this module should prepare the student to do the following:

A. Describe the characteristics of a small number of broad categories of teacher behaviors in classrooms, and the probable intentions of teachers at the time they exhibit each type of behavior.

B. Discriminate between examples of each major type of teacher behavior.

C. Demonstrate an example of each type of behavior in an appropriate setting.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. When asked, would be able to describe three ways of categorizing teacher classroom behavior and the characteristics that differentiate between categories and the intentions of the teacher when acting in each mode. The three categories shall be:

1. Management or administrative behavior.
2. Personal or social interaction.
3. Instructional or "teaching" behavior.

B. When told to produce an example of one of the three categories of teacher behavior, the student will be able to observe a short segment of interaction between a teacher and a pupil, and when the presentation is interrupted, will produce an example of the requested behavior in either written or oral form.

V. Modular Activity Flow Chart: See Figure 6.2.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

    a. Have additional instruction prior to taking this module.
    b. Study all or selected portions of this module.
    c. Proceed to the post-test or following module.

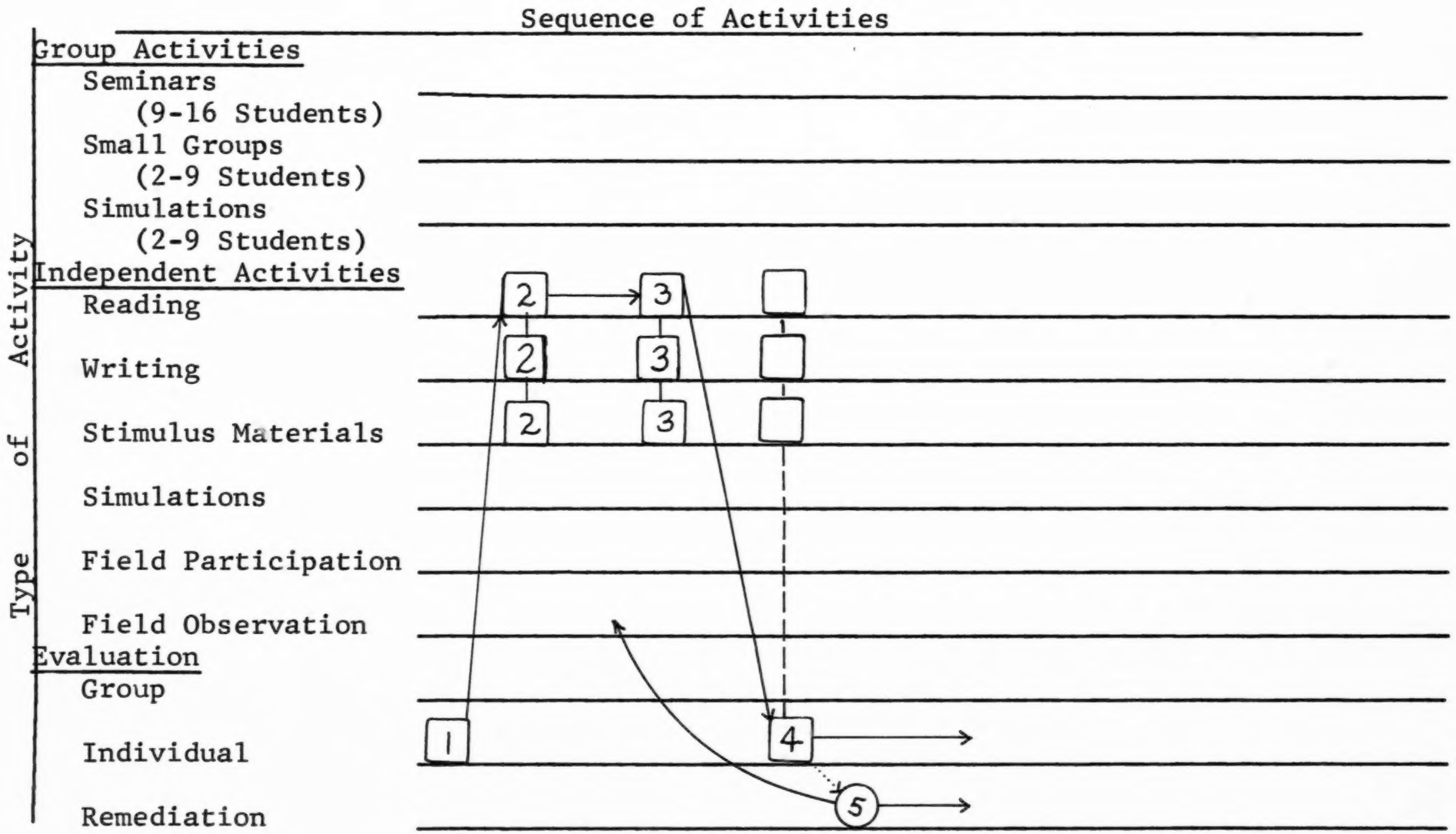
2. Students should study individually. The materials consist of semi-programmed texts with reading materials for reference, audio tapes, and coordinated film strips or slides. The student should learn to discriminate between broad categories of teacher behavior, and describe the characteristics and intentions of each.

3. The student should use a study guide, 8mm single-concept films with an audio strip, and semi-programmed materials for the purposes of observing teacher-pupil interaction and practicing responses typical of each major class of teacher behavior. When the student's response is to be oral, feedback is to be provided with an 8mm sound film loop so the student may compare his statements with that of an experienced teacher. When the student's response is written, normal programming techniques are to be used to give him confirmation.

4. Post-test consisting of opportunities to demonstrate each of the skills taught using written and visual materials with coordinated audio stimuli. Upon completion of the post-test materials, the student will receive a complete set of evaluation criteria for analyzing his own behavior. The student should make his own decision about his readiness for the next module or his need for further remedial work on the topic of this module.

5. Remedial materials would be available upon request to provide additional instruction, followed by a second set of post-test situations with appropriate criteria to be used in self-analysis of the student's performance. In the event that additional assistance is still requested, the student would request a remedial conference with a member of the instructional staff.

Modular Flow Chart TTP-1
Figure 6.2


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
2
2
3
3
3
4
5

TTP-2: Teacher Interpersonal/Social Behavior

I. Prerequisites: Completion of TTP-1. Concurrent with tutorial experience in the public school.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--8 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to discriminate between, and demonstrate examples of a wide variety of teacher behaviors intended to foster the personal and social development of the child. The general objectives of this module should prepare the student to do the following:

A. Describe the characteristics and discriminating features of a wide variety of teacher interpersonal/social behaviors.

B. Identify each type of interpersonal/social behavior when it is observed.

C. Demonstrate an example of each type of interpersonal/social behavior in an appropriate setting.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. When asked, state the essential characteristics and discriminatory features of each type of interpersonal/social teacher behavior, including such behaviors as:

1. Accepting or rejecting pupil feelings or emotions.
2. Accepting or rejecting pupil ideas or cognitive outputs.
3. Accepting or rejecting pupil efforts to manage individual or group activities.
4. Genuine sharing of personal ideas or feelings.
5. Expressing empathy with accuracy and appropriate intensity.

B. While observing the behavior of a teacher with one or more pupils, whether mediated or live, the student should be able to discriminate between interpersonal/social (affectively-oriented) teacher behaviors and management (procedural) or instructional (substantive) behaviors, and make the finer discriminations described in (A).

C. When asked to produce an example of each behavior described in (A), the student will be able to observe a segment of teacher-pupil interaction, and when the presentation is interrupted, produce an example of the requested behavior in written or oral form.

V. Modular Activity Flow Chart: See Figure 6.3.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

    a. Have additional instruction prior to taking this module.
    b. Study all or selected portions of this module.
    c. Proceed to the post-test or following module.

2. The student should study semi-programmed texts with reference reading materials, audio tapes and coordinated visuals. He should learn to describe the categorizing system, the features that discriminate between the behaviors in each category, and the intent or function of each type of behavior.

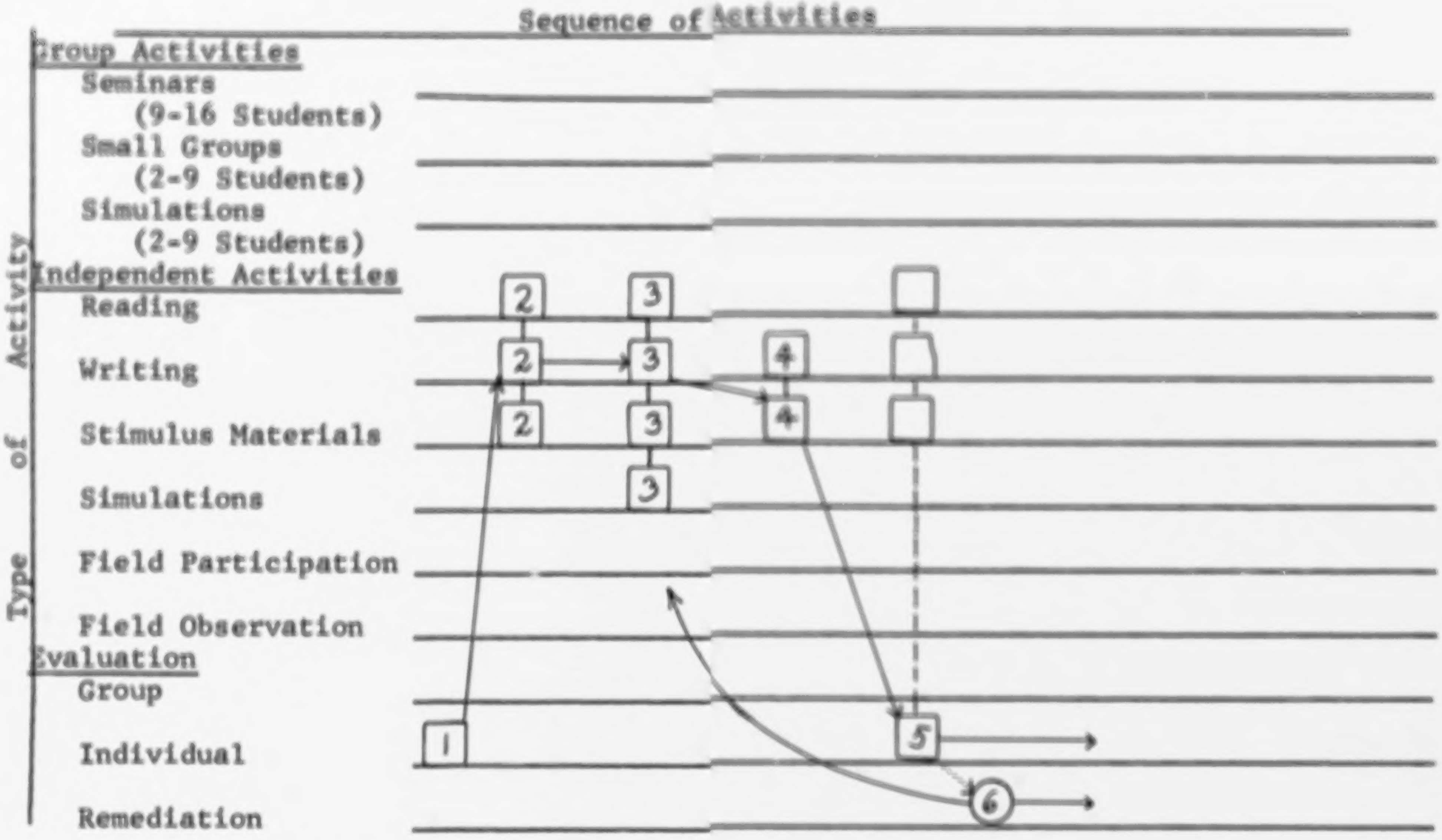
3. The student should use a study guide, sound-motion pictures, and semi-programmed materials to observe and record teacher-pupil interactions and to practice making responses typical of each major class of teacher behavior. Feedback will be given so that the student practices assessing his own behavior against appropriate criteria.

4. The student should make a tape recording of his own interaction with the child he is tutoring, and analyze the recording for the type and amount of interpersonal/social behavior displayed in the tutorial session.

5. Post-test to demonstrate the student's ability to describe, discriminate between and demonstrate each of the interpersonal/social teacher behaviors in appropriate settings. Test materials should include printed texts and audio-visual materials. The student should receive the criteria for evaluating his own behavior, and will make his own decision about his readiness for the next module or need for remedial work.

6. Remedial materials would be available upon request by the student followed by a second post-test and evaluative criteria. A faculty instructor would be available for personal counseling and guidance if requested.

Modular Flow Chart TTP-2
Figure 6.3


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
2
2
3
3
3
3
4
4
5
6

TTP-3: Teacher Management Behavior

I. Prerequisites: Completion of TTP-2. Concurrent with tutorial experience in the public schools.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--10 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to discriminate between and demonstrate examples of a variety of teacher behaviors intended to structure the activities of children (procedural management) and to facilitate the personal and academic growth of pupils. The general objectives of this module should prepare the student to do the following:

A. Describe the characteristics and discriminating features of a variety of teacher management behaviors (TMB).

B. Identify and record the presence of each TMB as it occurs in a live or mediated classroom.

C. Demonstrate an example of each TMB in an appropriate setting.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. When asked, state the characteristics and discriminating features of the set of teacher management behaviors, including such acts as:

1. Giving directions or organizing activities.

2. Differentiating and structuring acts according to:

   a. positive, "Do this!" vs. negative, "Don't do that!"
   b. openness of criteria
   c. visibility of teacher behavior (public-private)
   d. strengths of influence (strong-mild)
   e. accuracy of target
   f. number of issues handled simultaneously
   g. smoothness of activity flow vs. flip/flops
   h. rapidity of progression (frantic vs. drags)

B. When told to give an example of a specific type of management behavior, the student will be able to observe a short segment of teacher-pupil interaction, and when the presentation is interrupted, produce an example of the desired behavior in either written or oral form.

V. Modular Flow Chart: See Figure 6.4.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. The student should study semi-programmed texts with reference reading, audio tapes and coordinated visual materials. He should learn to describe the overall categorizing system, the features that discriminate between categories, and the intent or function of each type of behavior.

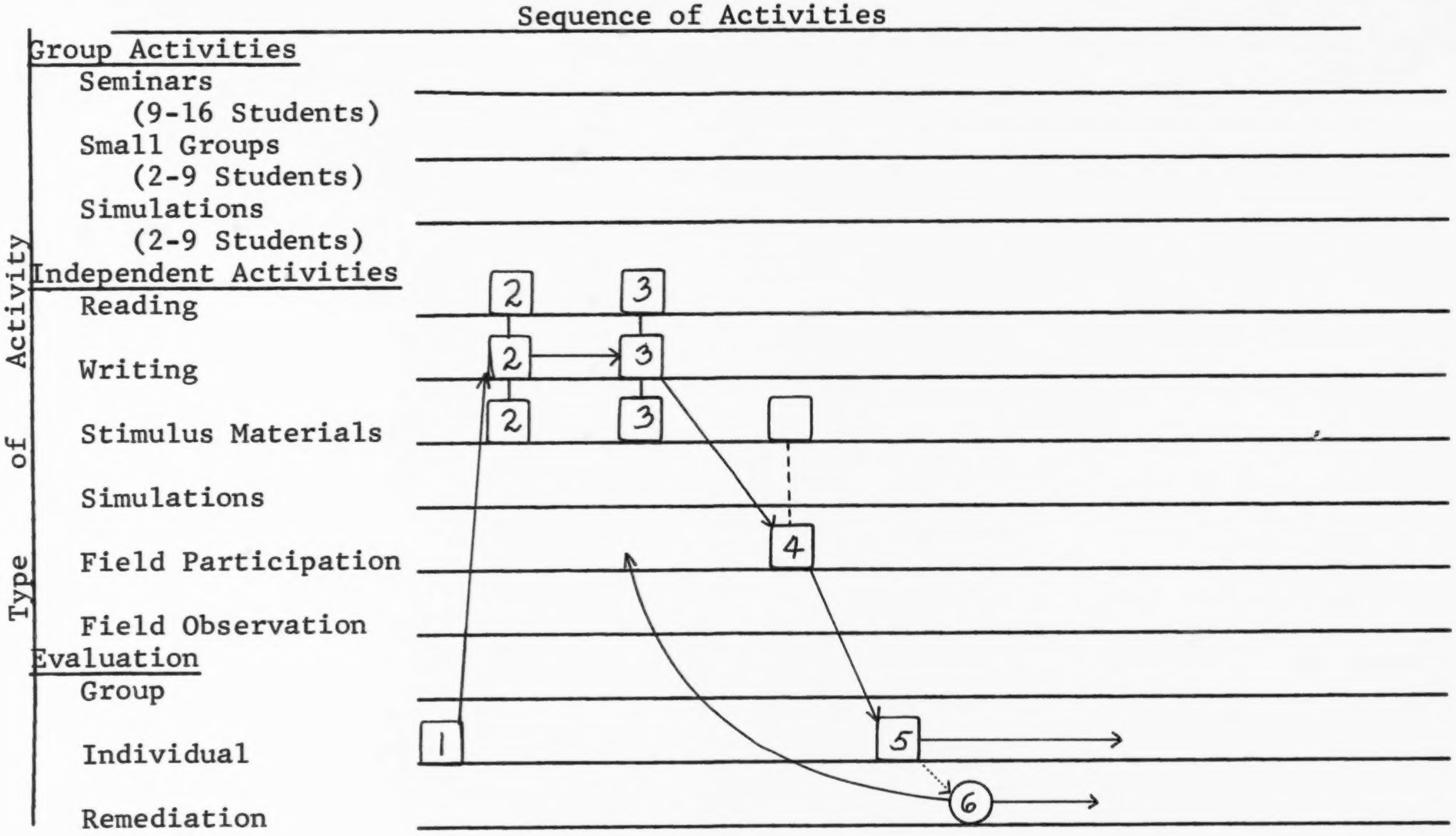
3. The student should use a study guide, sound-motion pictures and semi-programmed materials to observe and record teacher-pupil interactions, and he should also practice making responses typical of each major class of teacher management behavior, as well as the interpersonal/social behaviors practiced in the preceding TTP module. The student should be given both the criteria for judging his own behavior and examples of responses that have been judged adequate by experienced judges. This will permit him to exercise the behavior and the criteria for assessing the adequacy of the behaviors.

4. The student should make a tape recording of his own interaction with the child he is tutoring, and analyze the recording for the amount and type of management behavior he is able to demonstrate in a live situation.

5. Post-test to assess the student's ability to describe, discriminate between and demonstrate each of the management behaviors in an appropriate setting. Test materials will include reading materials, study guides and audio-visual materials. The student should receive criteria for evaluating his own performance, and should make his own decisions about his readiness for the next module or need for remedial work and guidance.

6. Remedial materials will be available upon the student's request, followed by a second post-test and evaluative criteria. A faculty member would be available for guidance if requested.

Modular Flow Chart TTP-3
Figure 6.4


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
2
2
3
3
3
4
5
6

TTP-4: Teacher Instructional Behavior

I. Prerequisites: Completion of TTP-3. Concurrent with tutorial experience in the public schools.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--10 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to discriminate between and demonstrate examples of a variety of teacher instructional behaviors intended to facilitate the development of a child's knowledge and understanding of significant academic subjects. The general objectives of this module should prepare the student to do the following:

A. Describe the characteristics and discriminating features of a variety of teacher instructional behaviors (TIB).

B. Identify and record the presence of each TIB, and other types of teacher behavior studied earlier, as it occurs in a live or mediated classroom setting.

C. Demonstrate, upon request, an example of each type of TIB, and those learned in TTP-2 and TTP-3, in an appropriate setting.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. When asked, state the characteristics and discriminating features of a set of teacher instructional behaviors, including such acts as:

1. Diagnosis, where the teacher elicits pupil behavior with the intention of determining the pupil's level of factual knowledge, meanings and interpretations of the major concepts in a field, and abilities to apply and analyze procedures and problems in that field.

2. Planning materials and activities for the teacher and pupil to facilitate pupil learning.

3. Prescribing materials and activities intended to facilitate pupil learning.

4. Presenting information or questions at various levels of conceptual complexity (data, discriminating, analyzing, generalizing, evaluating, etc.).

5. Evaluating student achievement (similar to initial diagnosis) against criteria.

B. When observing the live or mediated interaction of a teacher and at least one pupil, be able to identify and record each of the above teacher behaviors, as well as those learned in previous modules.

C. When told to give an example of a specific type of instructional behavior, the student will be able to observe a short segment of teacher-pupil interaction, and when the presentation is interrupted, produce an example of the desired behavior in either written or oral form.

V. Modular Activity Flow Chart: See Figure 6.5.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

    a. Have additional instruction prior to taking this module.
    b. Study all or selected portions of this module.
    c. Proceed to the post-test or following module.

2. The student should study semi-programmed texts with reference reading, audio tapes and coordinated visual materials. He should learn to discriminate between each category in the inclusive teacher-behavior classification system, and describe the intention of each type of behavior.

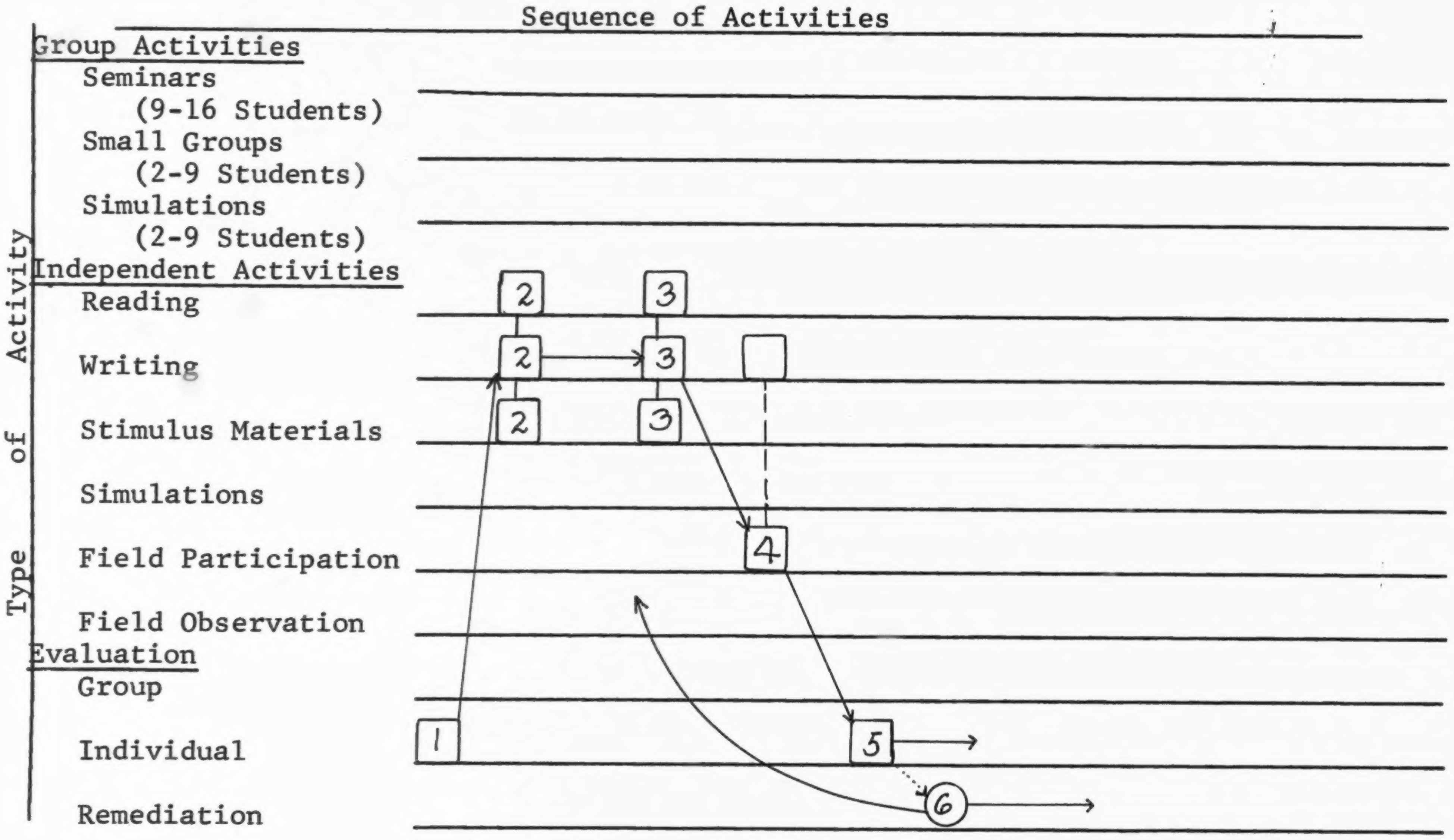
3. The student should use a study guide, sound-motion pictures and semi-programmed materials to observe and record teacher-pupil interactions (all types studied) in simulated settings. Using the same materials, he will practice making behaviors typical of each class in appropriate situations. The student should be given the criteria for judging the adequacy of his own behavior, as well as examples of responses thought to be adequate by a panel of judges. This will permit the student to practice both the production of a variety of teacher behaviors and the evaluation of his own performances.

4. The student should make a tape recording of his own interaction with the child he is tutoring to analyze the types and frequency of the teacher behavior he is able to demonstrate in a live, on-going setting.

5. Post-test to determine the students ability to perform the above tasks. Test materials should include study guides, reading materials and audio-visual materials. The student should receive the criteria for evaluating his own performance, and will make his own decision about his readiness for the next module or need for remedial work and faculty guidance.

6. Remedial materials and faculty guidance will be available if requested, followed by a second post-test with appropriate criteria.

Modular Flow Chart TTP-4
Figure 6.5


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
2
2
3
3
3
4
5
6

TTP-5: Classes of Educational Objectives

I. Prerequisites: Completion of TTP-1, CD-1.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--6 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to discriminate between different types of educational objectives (as commonly written and spoken) and to write objectives of each type. The general objectives of this module should prepare the student to do the following:

A. Describe the characteristics and discriminating features of statements of educational objectives that focus on different elements of a school system (society, school administration, the teacher, subjects, pupils, etc.)

B. Write examples of each type of objective.

C. Write objectives which include descriptions of behaviors of individuals or groups, the conditions under which the desired behaviors would be exhibited, and the criteria for judging the quality or quantity of the observed behaviors.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. When asked to prepare a set of objectives for an instructional unit, lesson, or curriculum, the student will be able to prepare several types of objectives, such as:

1. Global objectives of the culture.
2. General subject matter to be covered in a course.
3. Activities of the teacher.
4. General statements of desired characteristics of children.
5. Specific behaviors of learners after being taught.

B. When asked to prepare a set of objectives for his own tutorial sessions with a child from a public school, the student will write statements in each of the above categories, with a special emphasis on his pupil's post-instructional behavior, the conditions under which that behavior is to be elicited, and the criteria for judging the appropriateness of the behavior.

V. Modular Activity Flow Chart: See Figure 6.6.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

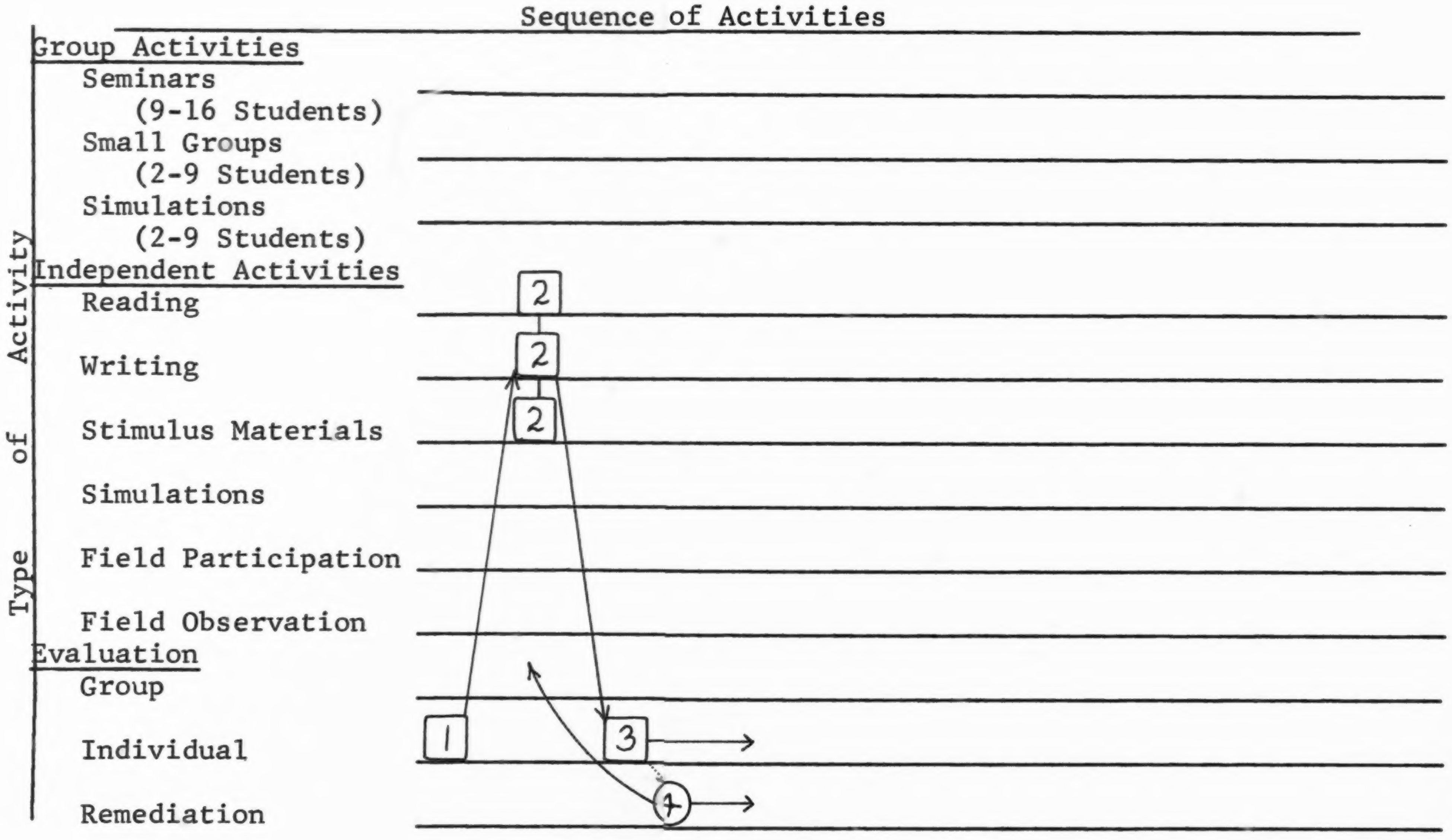
   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. The student should study semi-programmed materials with reference reading texts, audio tapes and coordinated visual materials. He should learn to recognize each type of objective when he sees it or hears it; he should be able to describe the strengths and shortcomings of different types of statements, and he should learn to rewrite statements until they have all of the characteristics that make objectives useful to the teacher in planning and measuring instructional activities.

3. Post-test to determine the student's ability to perform selected examples of the above behaviors. The student should receive the criteria for evaluating his own behavior, and will make his own decision about his readiness for the next module or need for remedial work and faculty guidance.

4. Remedial materials and faculty guidance will be available if requested, followed by a second post-test with appropriate criteria.

Modular Flow Chart TTP-5
Figure 6.6


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
2
2
3
4

TTP-6: Educational Objectives for Psychomotor Behavior

I. Prerequisites: Completion of TTP-5. Concurrent with tutorial experience in the public schools.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--4 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to discriminate between statements of different levels of physical skillfulness in behavior, and write objectives for different teaching lessons which include psychomotor outcomes. The general objectives of this module should prepare the student to do the following:

A. Recognize and discriminate between statements of educational objectives describing the physical behavior of children (as distinct from other forms of pupil behavior), and different levels of skillfulness.

B. Write and justify statements of educational outcomes concerning the psychomotor behavior of pupils.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. When given a list of educational objectives, including all of the types studied in TTP-5, and different levels of psychomotor skill, be able to identify each, and state the criteria for discriminating between them.

B. Given a "case study" description of an elementary school teaching-learning situation in which one or more pupils are expected to demonstrate specific psychomotor skill (e.g., handwriting, map drawing, playing a drum, etc.), be able to prepare objectives describing at least three levels of skillfulness such as:

1. Focusing on the task.
2. Making a response, even though awkward.
3. Performing a set of behaviors with skills integrated for this specific set of behaviors.
4. Demonstrating coordination among different classes of motor behaviors having related skills.
5. Overall integration of physical coordination among all of the behaviors the pupil exhibits.

C. When asked to prepare a set of psychomotor objectives for his tutorial sessions, he will select at least one aspect of the tutor-pupil relationship having psychomotor components, prepare a set of objectives covering at least three levels of skillfulness, and justify their relevance to the pupil, the school and society.

V. Modular Activity Flow Chart: See Figure 6.7.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. The individual student should study semi-programmed texts with reference reading materials, audio tapes and visual presentations. He should read about and practice the topics and skills identified in the objectives for this module. He should observe children exhibiting different levels of psychomotor skills in a wide variety of academic and work/play activity, and he should learn to identify each level of skill, and describe it in terms of competence levels in a psychomotor taxonomy of educational objectives.

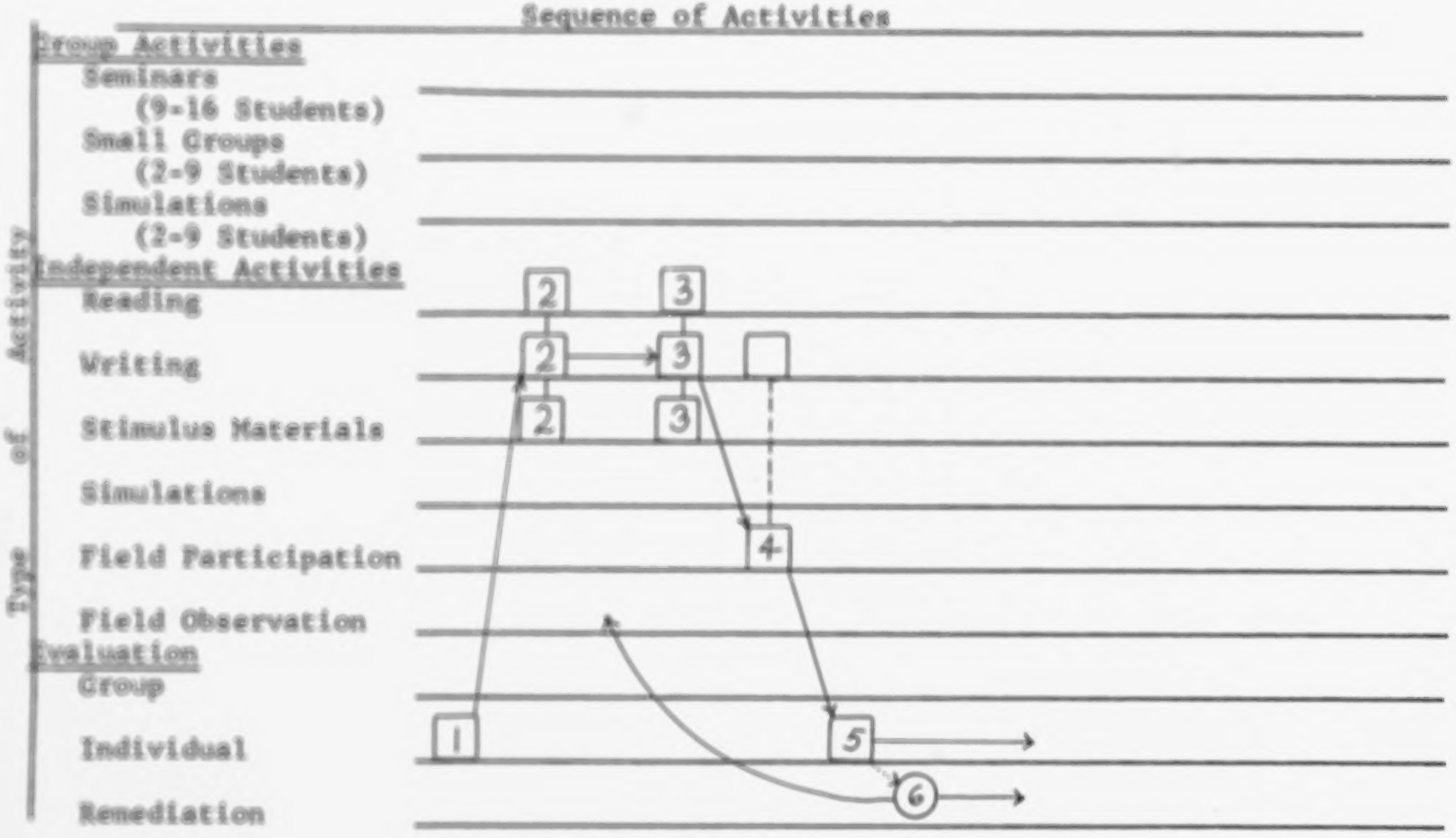
3. The student should work with well-developed case study materials which would establish the appropriate environment (text, audio and visual) for the development of a set of psychomotor objectives for the pupil(s), and provide a rationale for the specific objectives proposed.

4. The student should be asked to observe closely the pupil being tutored and establish a set of simple psychomotor objectives (and accompanying rationale) for that child. These statements should be retained by the student for use in subsequent modules.

5. Post-test to determine the student's ability to perform the above activities. Test materials would include a study-test guide, reading and audio-visual materials, and a set of criteria by which the student would evaluate his own performance and determine his readiness for the next module or his need for remedial work and guidance.

6. Remedial materials and faculty guidance would be available upon the student's request, followed by a second post-test with appropriate criteria for student self-assessment.

Modular Flow Chart TTP-6
Figure 6.7


Sequence of Activities
Type of Activity
Group Activities
Seminars (9-16 Students)
Small Groups (2-9 Students)
Simulations (2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
2
2
3
3
3
4
5
6

TTP-7: Educational Objectives for Affective Behavior

I. Prerequisites: Completion of TTP-5. Concurrent with tutorial experience in the public schools.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--4 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to discriminate between statements of educational objectives describing different levels of personal involvement, attitudes, motivations, values, etc., and to write objectives for lessons and curricula which include these types of outcomes. The general objectives of this module should prepare the student to do the following:

A. Recognize and discriminate between statements of educational goals describing the affective characteristics of children (as distinct from the other objectives already studied) as inferred from watching specific types of behaviors.

B. Write and justify the appropriateness of statements concerning the affective outcomes of lessons and curricula.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. When given a list of educational objectives, including the types of objectives studied in preceding modules and the different types and levels of affective behavior, be able to identify each and state the criteria for discriminating between them.

B. Given a case study description of an elementary classroom, including the characteristics of the pupils, be able to prepare a set of educational objectives for the class and individual pupils for at least three levels of affective involvement, such as:

1. Being willing to attend to the stimuli of the situation.
2. Responding when directed.
3. Consistency of self-initiate responses, at least within the limited regions of activity, etc.

C. Be able to relate a taxonomy of affective behavior to the various types and levels of attitudes, (toward self, others, objects, and activities), motivations (affiliation, achievement, power, avoidance of failure) interests, and values.

D. When asked to prepare a set of affective objectives for the child with whom he is working in a tutorial relationship, prepare objectives for at least one area of the child's activities, including at least three levels of pupil involvement. Justify the importance of these objectives for the child, school, and society.

V. Modular Activity Flow Chart: See Figure 6.8.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

    a. Have additional instruction prior to taking this module.
    b. Study all or selected portions of this module.
    c. Proceed to the post-test or following module.

2. The student should study semi-programmed texts with reference readings, audio tapes, and visuals. He should read and practice the skills and topics identified in the objectives above. He should observe children exhibiting different types and levels of affective behavior in both academic and work/play activities, learn to identify each type and level of affective behavior displayed, and describe observed behavior in terms of an affective taxonomy of behavior.

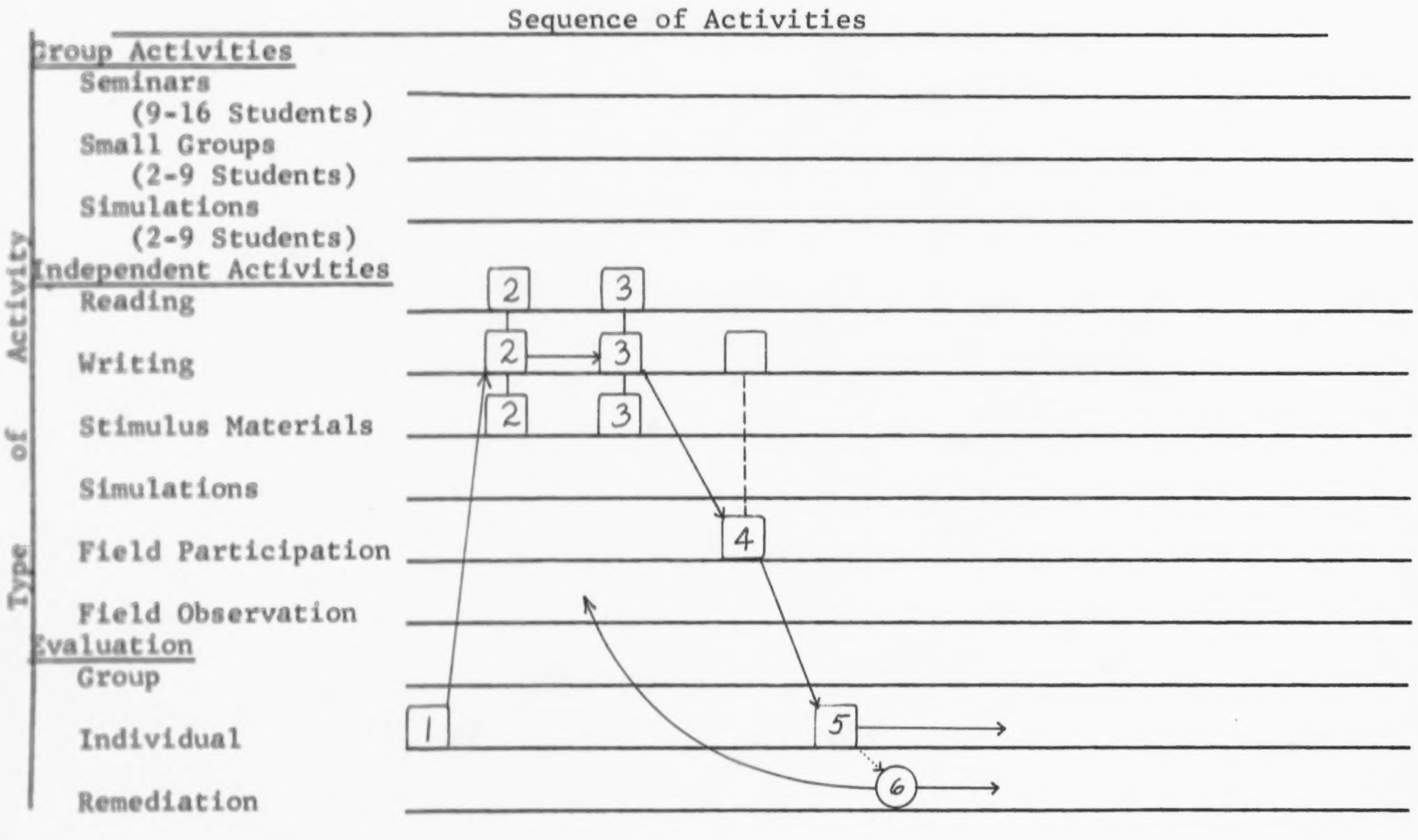
3. The student should work with well-developed case-study materials which would establish a realistic situation through printed materials and audio-visual displays with descriptions of the characteristics of the pupils presented, and develop a set of objectives for the children including all the preceding types of objectives and a set for the affective dimension of their behaviors. He should also provide a rationale for the affective objectives proposed.

4. The student should be asked to observe the pupil being tutored in the public school and prepare a set of affective objectives, with accompanying rationale, for that child. These statements should be retained by the student for use in other modules.

5. Post-test to determine the student's ability to perform the above activity, his readiness for the following module or need for remedial activities and guidance. The student should be furnished the criteria for judging his own performance on the test materials, and should make his own decisions about his next appropriate activity.

6. Remedial materials and faculty guidance would be available upon request, followed by a second post-test with criteria for student self-evaluation.

Modular Flow Chart TTP-7
Figure 6.8


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
2
2
3
3
3
4
5
6

TTP-8: Educational Objectives for Cognitive Behavior

I. Prerequisites: Completion of TTP-5. Concurrent with tutorial experience in the public schools.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--4 hours.
University fauclty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to discriminate between statements of educational objectives describing different types of cognitive learning and behavior, and to write cognitive objectives for lessons and curricula. The general objectives of this module should prepare the student to do the following:

A. Recognize and discriminate between statements of educational objectives describing the cognitive outcomes of education (as distinct from the other types of objectives already studied) as they can be inferred from observing and measuring certain pupil behaviors.

B. Write and provide a rationale for statements of educational outcomes describing various levels of cognitive behavior to be achieved through lessons, experiences, and curricula.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Given a list of statements about the outcomes of education, (including all types previously studied), be able to discriminate between them and statements concerning a wide variety of cognitive outcomes. State the criteria for the discriminations and the rationale for the behavioral statements of cognitive outcomes.

B. From a carefully described and audio-visual mediated case study of elementary school children in a classroom, construct a set of cognitive objectives including a wide range of types of learning products as well as the processes for demonstrating such learnings as:

1. Recall of data, associations, concepts, principles, etc.
2. Processing data (given or recalled) to:

    a. discriminate

   b. define, interpret, or translate
   c. apply principles
   d. analyze, synthesize, infer, hypothesize

3. Make decisions, evaluate using various criteria.

C. Be able to describe the characteristics of objectives that make them optimally useful to a teacher. These objectives should be stated in terms of behavior that can be used as evidence of the achievement of the objective, including a description of the situation in which the behavior is to be demonstrated, and containing the criteria by which successful performance is to be evaluated.

D. When asked to prepare a set of cognitive objectives for the child with whom the student has a tutorial relationship, he will write at least one statement for each of three increasing levels of cognitive complexity and provide a rationale of these goals for the child, the school, and society.

V. Modular Activity Flow Chart: See Figure 6.9.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. To learn about and practice the knowledge and skills described above, the student should study semi-programmed materials coordinated with reference readings, and audio-visual materials. He will observe children exhibiting a wide variety of behaviors having essentially cognitive components in both academic and work/play situations, learn to identify each type and level of behavior displayed, and describe the behavior in terms of a taxonomy of cognitive behaviors.

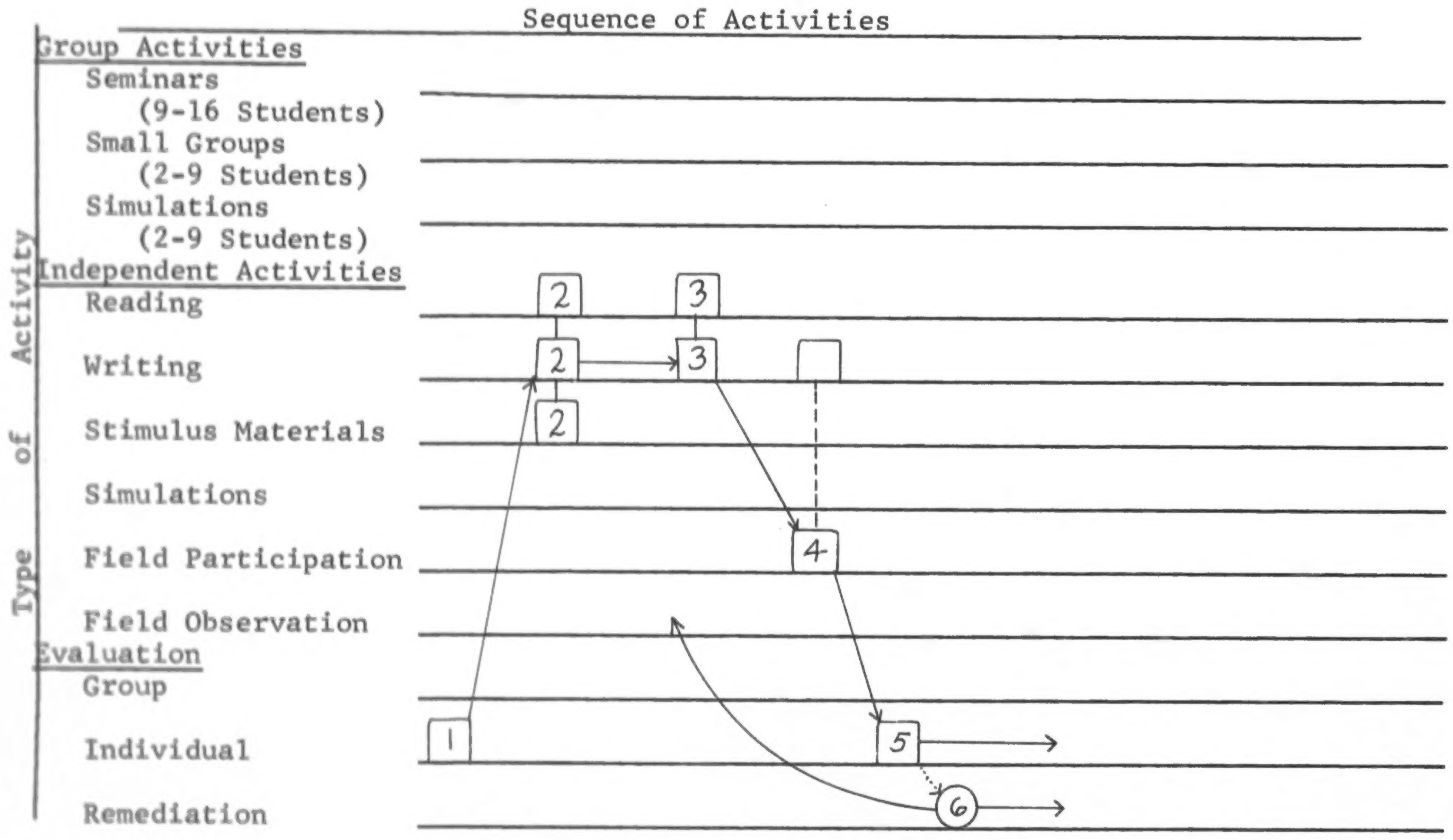
3. The student should work with well developed case study materials which would establish a simulated elementary school situation, and develop a set of cognitive objectives for the children and also give examples of all previously studied objectives. He should provide a rationale for the objectives proposed.

4. The student should prepare a set of cognitive objectives with accompanying rationale for the child being tutored in the public school. These statements should be retained by the student for use in later modules.

5. Post-test to determine the student's readiness for the following module or for remedial work and guidance on the topics of this module. The criteria for successful performance should be provided for the student in order that he may make his own decision about the next appropriate activity.

6. Remedial materials and faculty guidance would be available to the student upon his request, followed by a second post-test with criteria for self-evaluation.

Modular Flow Chart TTP-8
Figure 6.9


Sequence of Activities
Type of Activity
Group Activities
Seminars (9-16 Students)
Small Groups (2-9 Students)
Simulations (2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
2
2
3
3
4
5
6

TTP-9: Planning and Conducting Specific Strategies

I. Prerequisites: Completion of PST-6, TTP-4, CD-3, TTP-5, TTP-6, TTP-7, TTP-8. Enrollment in module by a group of four (4) students, all agreeing to stay together until all have completed the module.

II. Placement of Module: Junior, pre-professional year.

III. Estimated Time: Student time--18 hours.
University faculty time--6 hours per group of four students.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to produce a planned sequence of teacher behaviors (a strategy), to record and analyze the production, and compare it with the intended plan. The general objectives of this module should prepare the student to do the following:

A. Translate lesson plans for specified children and subject materials into teaching strategies.

B. Operate simple video tape recording equipment in order to make and analyze his own strategies, to observe and compare them with his original plans (revising his productions until he is able to pre-plan his own behavior).

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Given a simulated class of three elementary pupils (roles to be played by other group members) with given characteristics and subject matter needs, he will plan three alternative strategies to accomplish similar goals, and determined by a roll of a die, conduct one of these plans. He should record and analyze the proceeding to demonstrate his ability to pre-plan his own behavior.

V. Modular Activity Flow Chart: See Figure 6.10.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Join with three other students ready to begin this module, each agreeing to stay together until all have completed the module. Draw from the Instructional Resources Center a packet of study materials for this module and participate together in an introductory experience which relates the "art" of teaching to any other professional art in which the practitioner must develop a wide range of specific skills to be applied in his own way with unique variations. The larger the number of "teaching elements" the teacher can master, the more unique will be the flavor of his productions.

3. From a set of simulation materials, each student will develop the pupils' data and subject matter for a short lesson. Each student will take turns conducting their strategies (each playing the role of pupils for the others), recording and analyzing their performances until they are able to demonstrate their abilities to plan their own behavior and demonstrate a wide variety of teacher acts (as described in TTP-1 through TTP-4).

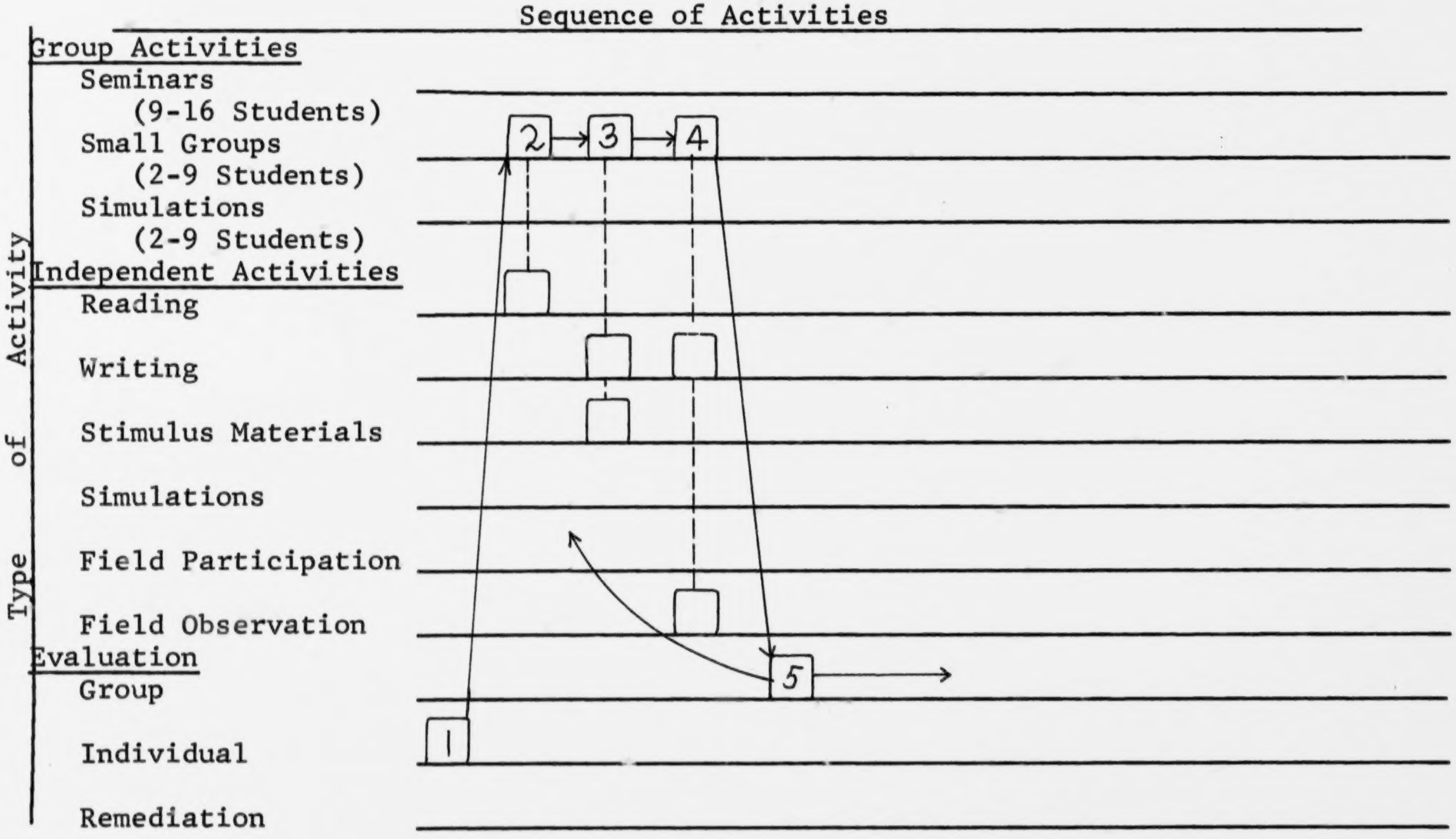
4. Each student should attend the tutorial meeting of one other member of the group to record a tutorial session in which the tutor would deliberately plan to exhibit a wide variety of teaching behaviors with an intended strategy. As a group, the students should review and analyze these recordings to assist the tutor and compare his intentions with his productions, and to observe the effect of these behaviors on the pupil.

5. Post-test should determine the student's ability to perform these tasks through a combined self-analysis (using criteria supplied) and the evaluation guidance of an instructor. The instructor would meet with the group to listen to their analysis of their own recordings and to observe each student in the process of planning, conducting, and analyzing a strategy prescribed by random drawing from the simulation materials. The instructor should assist the group in assessing the performance of each student against established criteria to determine his readiness for the next module, or his need for further instruction.

6. Remedial materials and instructor guidance will be available if requested by the group as it plans its own program to identify and strengthen each member's shortcomings, and as it plans the second post-test situation in which to demonstrate its achievement of the module objectives.

5

Modular Flow Chart TTP-9
Figure 6.10


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5

TTP-10: Elementary Statistics for Teachers

I. Prerequisites: None.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--6 hours.
University faculty time--0 hours.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to compute and interpret statistical data on teacher made and standard tests, and to read and understand statistical data and inferences presented in research reports. The general objectives of this module should prepare the student to do the following:

A. Define common statistical terms such as mean, median, percentile, standard deviation, level of confidence, correlation, etc.

B. Interpret reports of test scores on standard tests of achievement, intelligence, etc., their strengths and limitations.

C. Compute statistical data from raw scores and make appropriate inferences.

D. Interpret data and inferences given in reports on educational research, with particular emphasis on the significance of differences between groups and correlations between variables.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Given data on the IQ achievement of students in a class, interpret these data in terms of expected behavior, the significance of differences between individual scores, group scores and national norms, and the implications of these scores for teachers.

B. Given raw scores on a teacher-made test, compute the mean and standard deviation, and also compute the correlation beweeen these scores and data from standard tests on the same pupils.

V. Modular Activity Flow Chart: See Figure 6.11.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

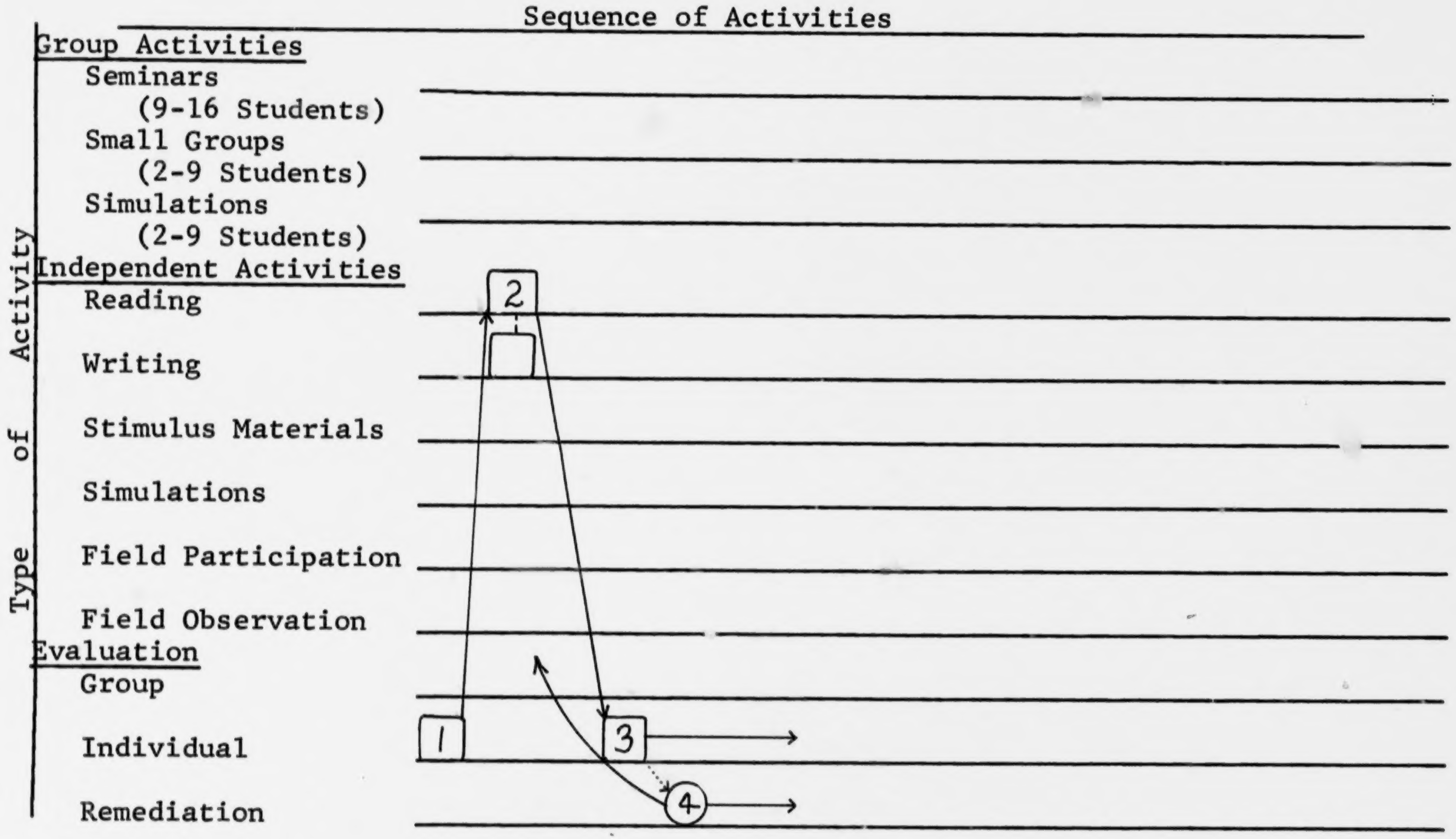
    a. Have additional instruction prior to taking this module.
    b. Study all or selected portions of this module.
    c. Proceed to the post-test or following module.

2. The student should study semi-programmed materials with reading reference materials and coordinated reports of relevant research. As in normal programmed materials, the student should be furnished with the criteria for acceptable performance, and would assess his own achievement as he progressed through the materials. Because of the wide variation in mathematical skills among student-teachers, many branch points would be built into the study program.

3. Post-test to determine if the student should: (a) repeat certain parts of this module, or engage in other remedial work, (b) proceed on to some other module.

4. If the post-test indicates a need for the student to repeat certain aspects of the module or engage in some other remedial work, a remedial conference would be held with a professional staff member.

Modular Flow Chart TTP-10
Figure 6.11


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4

TTP-11: Research on the Effect of Teaching Behavior on Students

I. Prerequisites: Completion of TTP-10, CM-10,CD-7. Concurrent with contact with children in public school classrooms, having limited responsibilities for teaching.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--24 hours.
University faculty time--4 hours per group of 8 students.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to relate published research on teaching practices to the types of teacher behavior and strategies studied in this component, and to predict the outcomes of education for children exposed to different teaching environments. The general objectives of this module should prepare the student to do the following:

A. Describe the purpose and results of some of the major studies of teaching behavior, and its influence on pupil learning.

B. Predict the probable outcomes of instruction on different types of pupils under different styles of teacher influence.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. When given an outline or transcript of teacher-pupil interaction, interpret the teacher strategy in terms of categories and classes of behavior presented in earlier modules and in terms of the environments studied by at least five educational researchers, and predict the outcomes for pupils in general.

B. Given an example of teacher behavior, and a description of the general approach used by the same teacher over a long period, predict the outcomes for children of several different characteristics, including:

1. Different combinations of motivations such as achievement, affiliation, fear of failure.
2. Different patterns of personal characteristics such as Erikson's trust, autonomy, etc.
3. Different levels of cognitive development, IQ, and Piaget's conceptual stages.
4. Different types of social and ethnic backgrounds and related linguistic skills.

C. Given descriptions of the characteristics of specific children and the desired outcomes from a lesson, recommend and describe a particular pattern and strategy of teacher behavior to achieve these outcomes, and also provide a rationale for these strategies in terms of the research reports studied.

V. Modular Activity Flow Chart: See Figure 6.12.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Join with a group of 6-10 students who will agree to stay together until all have completed the module, and draw out of the Instructional Resources Center the appropriate study materials and guides. They will participate together in an advanced organizer which sets the stage for the module, describes its objectives, and the procedures involved.

3. Each student will read and make notes on several reports of research on instruction and teacher-pupil interaction, using semi-programmed text materials to pose important questions and provide feedback confirmation as he reads and integrates these ideas.

4. Using case study materials with audio-visual components, each student will practice applying the research conclusions and his own skills for the analysis of teaching to predict the outcomes of the observed teaching on the "pupils".

5. The students should meet as a group, with an instructor to act as moderator (not as lecturer), and discuss their predictions and related rationales.

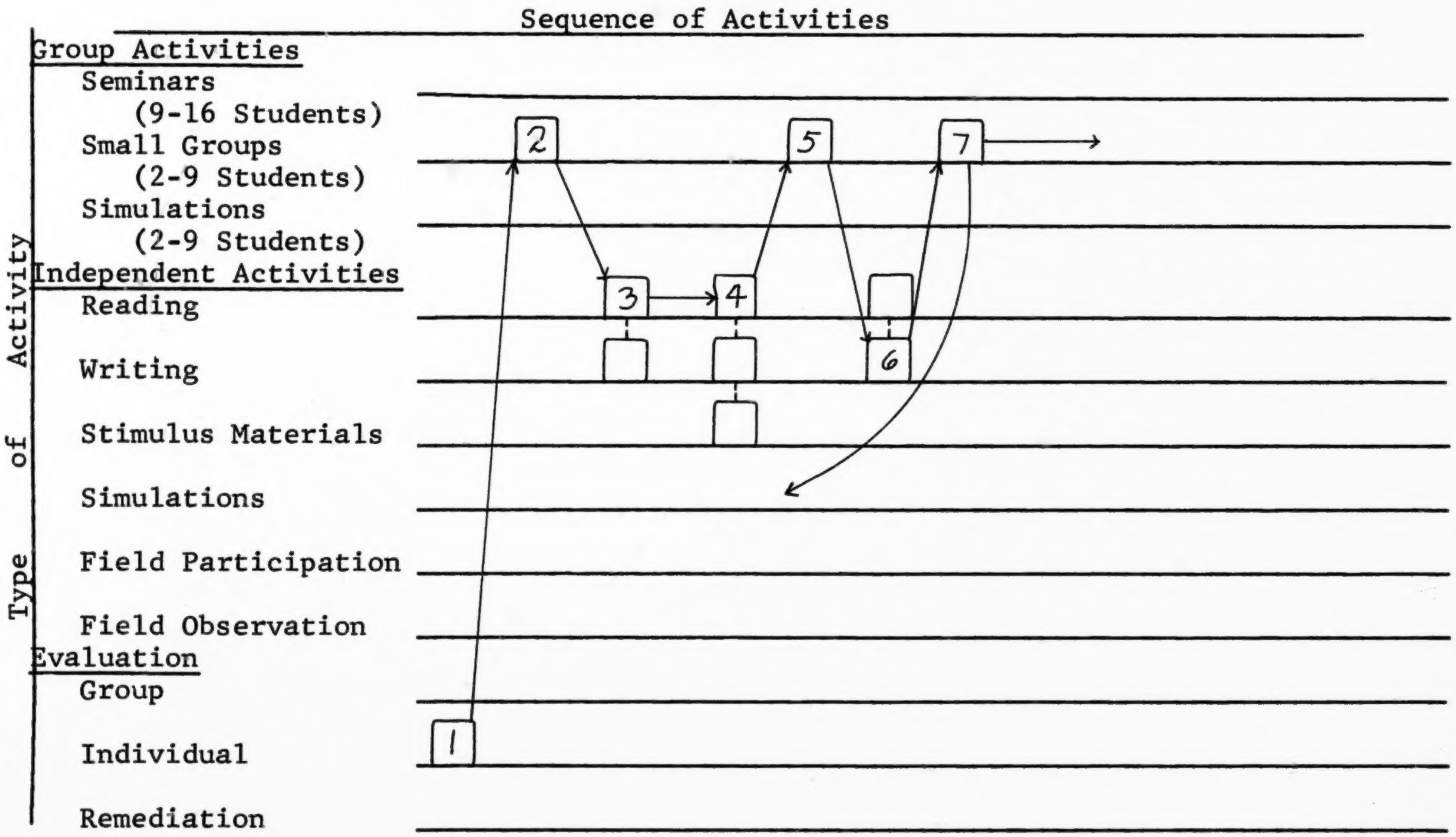
6. Using additional case study materials, each student would examine the teaching strategies used by the teacher and predict the outcomes for different students described by the case materials. Each prediction should be supported by information drawn from the research reports. For the same pupils, with given subject matter and objectives, recommend and provide a rationale for a teaching style and specific strategies to accomplish these goals.

7. The group will meet a second time with the same instructor to examine the individual predictions and recommendations and

establish their own criteria for judging the appropriateness of their own activities. This final group meeting would continue until it was agreed that most of the students were ready to go on to the next module.

8. Remedial work and guidance should be provided for students who were not able to meet the criteria established by the group. Students needing additional time or assistance should be provided with fresh materials, and they would then meet with the next group and complete the module with them.

Modular Flow Chart TTP-11
Figure 6.12


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7

TTP-12: Management of Behavior Modification

I. Prerequisites: Completion of TTP-11, PST-7. Concurrent with CD-9 (Reinforcement Theories). Concurrent with teaching relationship with public school.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--24 hours.
University faculty time--4 hours per group of 4 students.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to describe several manipulative factors that can influence the behavior of another person, to practice using these influences, and to discuss their positive values and possible limitations. The general objectives of this module should prepare the student to do the following:

A. Define a number of technical terms including: reinforcement, contingent, shaping, fading, secondary reinforcement, discriminative stimulus, intermittent reinforcement, extinction, etc.

B. Describe the manner in which different types of reinforcement (physical, social, intrinsic, etc.) can be used to influence the observable behavior of a pupil.

C. Describe the events observed in classrooms in terms of reinforcement theories as described by Skinner and others.

D. Demonstrate the use of reinforcement techniques in both simulated and real interactions with school children.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. Given a description of each of three different children, state whether physical, social or intrinsic reinforcements would be most appropriate (likely to be effective) with each child, and describe the manner and timing for using each.

B. While observing the interaction of a teacher and class (live or mediated), record the interaction using procedures learned in the preceding modules, and describe the sequence of events in terms of schedules of reinforcement, types of reinforcers, extinction, etc.

C. Demonstrate the use of behavior management techniques in both role-playing situations (other students playing the roles of pupils) and in tutorial teaching situations. Show the use of similar principles for modifying behavior that is maladaptive to school learning as well as "healthy" behavior needing further development.

V. Modular Activity Flow Chart: See Figure 6.13.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. Students should begin the module in groups of four, all of whom would stay together until completion of the post-test situation. Students, in groups of 12-16, should begin with an orientation seminar meeting with an instructor. A general introduction to the content, procedures, and purposes of the module should be followed by a discussion of topics that commonly disturb student teachers when the deliberate control of another's behavior is proposed:

   1. Ethical considerations and the use of aversive methods.
   2. The "dehumanization" of certain forms of manipulation.
   3. The issue of creativity vs. conformity.
   4. Balances between pupil freedom and restrictions.
   5. The moral right of a person to deliberately change another.

3. Working alone with programmed instructional materials which are coordinated with audio-visual displays, the students would learn and practice basic concepts and terminology. They should observe and analyze case studies and films showing both examples and non-examples of the systematic control of contingencies in teacher-pupil interactions.

4. In groups of four, the students should role play situations designed to allow for control of pupil behavior through different types of reinforcements and schedules. The role playing should be recorded on video tape for self-analysis (and subsequent analysis by an instructor) using criteria provided.

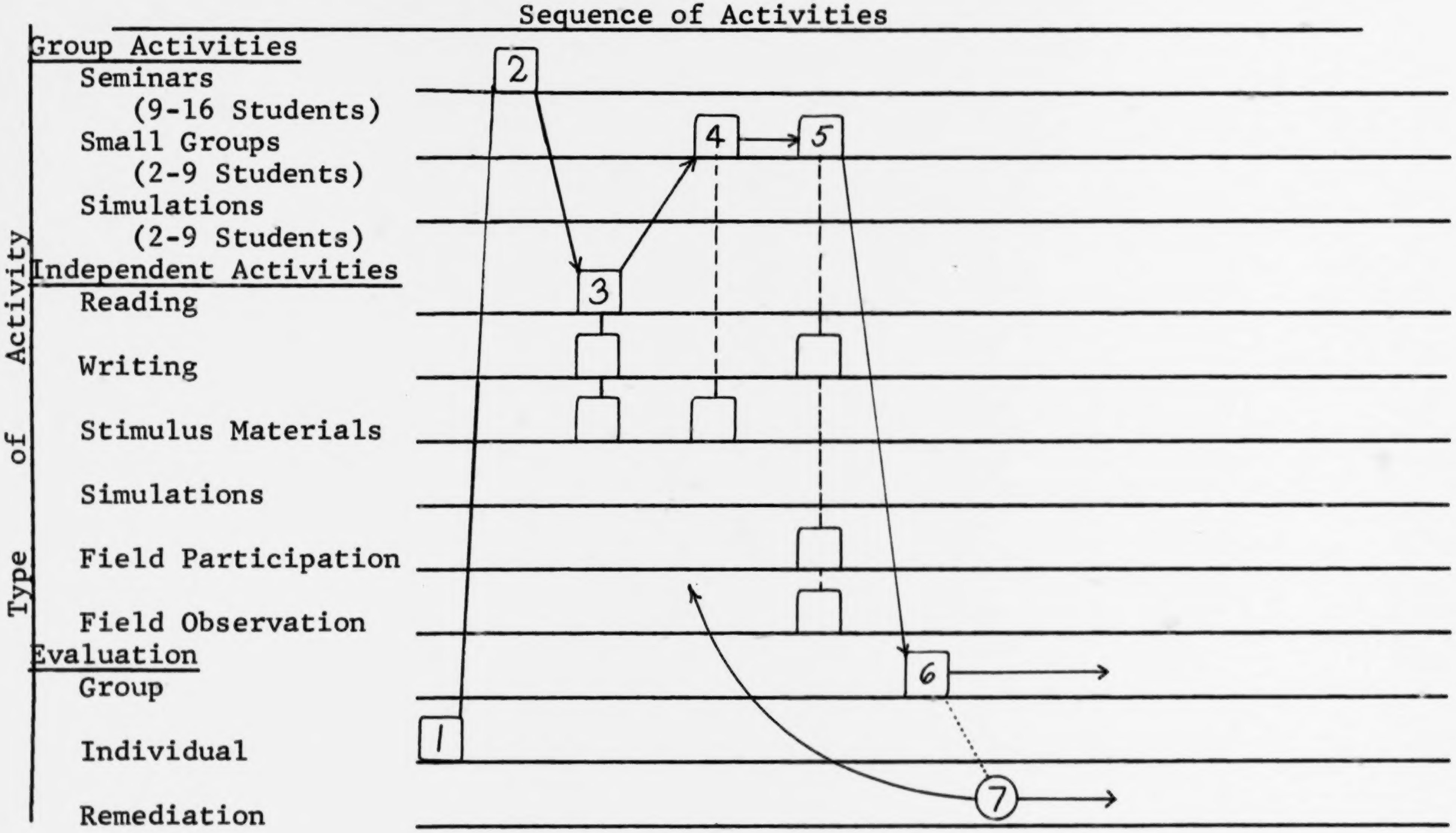
5. Working in pairs, each student should plan and conduct reinforcement schedules with his tutorial pupil to produce a desired change in the pupil's behavior. The second student should record and take notes on the interaction. Their report and conclusions should be analyzed by the other group

members to be sure each student was able to demonstrate the use of reinforcement/control techniques.

6. The post-test should consist of a final seminar workshop for 8-12 students. They should be asked to present their recorded teaching episodes and analyses, and to conduct short role-playing situations with the instructor participating. Criteria should be furnished for the self-evaluation of students with the instructor's assistance.

7. Remedial materials and faculty guidance would be provided upon request of the individuals or group, followed by additional post-test activities.

Modular Flow Chart TTP-12
Figure 6.13


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6
7

TTP-13: Matching Instructional Behavior to Student Needs

I. Prerequisites: Completion of TTP-12, CM-9. Concurrent with teaching responsibilities in public schools. Students will begin this module in groups of four.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--16 hours.
University faculty time--4 hours per group of four students.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to develop the ability to interact with either one or a small group of pupils and adjust the teacher behavior according to the diagnosed needs of the pupil. The general objectives of this module should prepare the student to do the following:

A. Participate in a role-playing situation with three "pupils" and demonstrate the ability to modify his planned instructional behavior based on the diagnosis of the characteristics of the pupils and the demands of the situation.

B. Describe a number of different modes in which a teacher (displayed in a film interacting with pupils having known characteristics) could behave in a variety of situations calling for: (a) management, (b) interpersonal/social, or (c) instructional behavior, and give a rationale for each strategy based on a prediction of the outcome of the strategy with each child.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. When observing teacher-pupil interaction and given the characteristics of the pupils, describe alternative ways in which the teacher could behave (when the presentation is halted at a point of decision-making for the teacher), predict the probable outcomes of each alternative for each child, and justify the selection of one recommended strategy.

B. In a simulation controlled by printed materials and involving the other students in the group (playing pupil roles described by the simulation materials), the student should be able to plan an instructional strategy and adjust this strategy according to the pupils' behavior (directed by the simulation) under conditions suggesting the need for different types of teacher behavior.

C. When observing a video tape recording of the above simulation describe the rationale for the decisions made in the simulation and evaluate the outcome relative to his expectations.

V. Modular Activity Flow Chart: See Figure 6.14.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. The students comprising the four member group should come together with the study materials for the module, and plan their schedule for individual reading and subsequent group discussion and role-playing.

3. Each student should work independently with a study guide, semi-programmed materials coordinated with reference reading, and audio-visual materials for practicing the behaviors of identifying alternative strategies and anticipating the outcomes of each alternative for different children. Feedback confirmation would be provided through normal programming techniques with the exception being that instead of only one correct response, the student should be given the criteria for evaluating his own response with examples of adequate and inappropriate behaviors by other teachers.

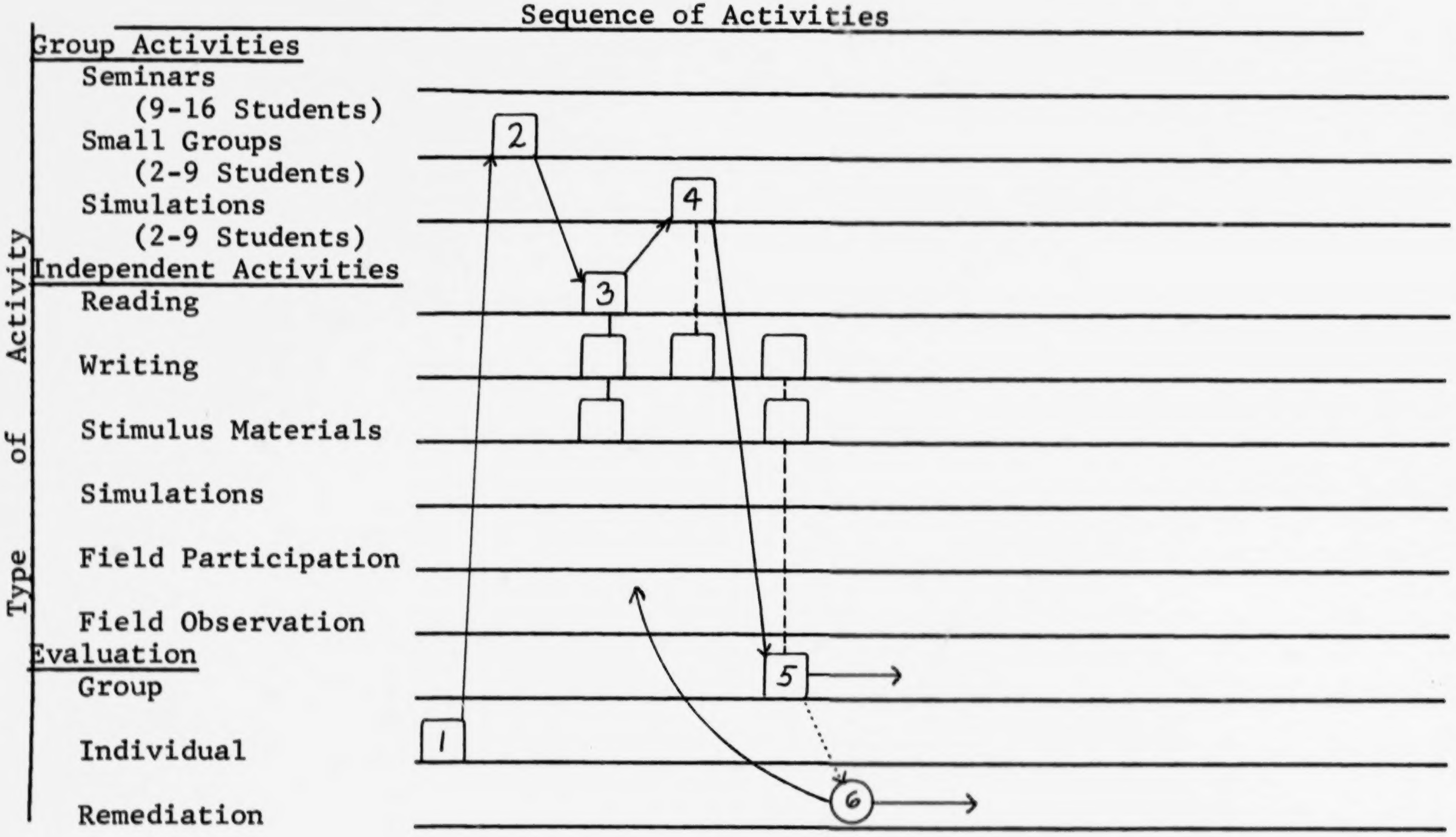
4. The four group members should come together for a discussion of their responses to the individual materials. They should use simulation role-playing materials; each student should act once as the teacher and as a pupil three times. The "pupils" should be carefully described by the materials, and their behaviors established at critical points in order to provide a variety of settings for the teacher to adjust his behavior. The simulation role-playing should be recorded for analysis by the group, with each "teacher" giving his rationale for the behavior selected and demonstrated in the simulated "play".

5. The group should meet with an instructor to display selected portions of the video tape recording, their analysis of the actual interaction that took place, and the "teacher's" rationale for the behaviors demonstrated. Using the categories of teacher behavior studied in earlier modules, the understandings of child development obtained in the CD modules, and the results of research on teacher-pupil interaction, the simulation role-playing should be analyzed to determine the appropriateness of the teacher's decisions. The criteria for

evaluating the readiness of the group members for the next module would be presented to the group, and they should make their own decision with assistance from the instructor.

6. Remedial materials (reference reading and additional simulation materials) and faculty guidance would be available to the group or individuals upon the request of the group, individual students, or the instructor supervising the post-test. The nature of the second post-test, for those in remedial activities, should be worked out with the instructor or faculty members.

Modular Flow Chart TTP-13
Figure 6.14


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
4
5
6

TTP-14: The Management of Pupil Behaviors in Groups

I. Prerequisites: Completion of any two modules on the Theories of Child Development, CD-10, 11, 12, or 9. Completion of SCF-7. Concurrent with teaching responsibilities in public schools.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--24 hours.
University faculty time--4 hours per group of four students.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to extend the behavioral repertory of the student beyond his ability to manage one child in a tutorial setting to include behaviors appropriate to managing children in groups. The general objectives of this module should prepare the student to do the following:

A. Describe a set of management behaviors for controlling the activities of individuals in group settings and the actions of the group as a whole.

B. Describe the probable result of certain undesirable group management behaviors that are either too controlling or inadequate.

C. Identify different classes of group management techniques in mediated presentations and related theories of teacher-pupil interaction.

D. Demonstrate group management techniques in mediated and live settings, and state the rationale for the behaviors used.

E. Explain the differences in a child's behavior when he is with one adult and when he is with a peer group and one adult.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. When observing the behavior of a child by himself, interacting with a teacher, or acting as a member of a class, be able to explain the differences in his behavior in terms of such factors as:

1. Group expectations or role theories.
2. The relative strengths of different value systems.
3. The differences in the total stimulus to which he is responding, etc.

B. While observing the mediated behaviors of several teachers, identify the specific group management techniques used, and relate the subsequent class activities to the effectiveness (or lack of effectiveness) of the teacher strategy used, such as:

   1. Accuracy of teacher influence in focusing on the source of influence within the class.
   2. Ability to handle one or more activities simultaneously in the class.
   3. Tempo of class activities, neither too fast nor too slow.
   4. Clarity, strength and smoothness of teacher style, etc.

C. When observing the behaviors of a group of children in a mediated setting, be able to sense and respond to the critical factors as recorded on a video tape for subsequent analysis.

D. When teaching a class of children in the public school, be able to plan for and demonstrate the ability to produce examples of management behavior that is target-accurate, also demonstrate the ability to deal with more than one simultaneous activity, provide smooth transitions, etc.

V. Modular Activity Flow Chart: See Figure 6.15.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. The four students working together on this module should meet for orientation to the modular activities and to plan their independent reading schedules and group meetings.

3. Each student should work alone with a study guide, semi-programmed texts, coordinated reference reading material, and audio-visual materials. The student should observe films of teacher-class interactions and learn to identify the teacher's management behaviors, and their effect on different types of pupils and the class.

4. The group should meet to discuss their observations and conclusions from their reading and film viewing. They should be oriented to the next phase of their individual work with audio-visual materials and the video tape recorder.

5. Each student should view a film portraying a class of pupils as though the student were standing in the position of the teacher. The class would act, and the student would be instructed to behave as though he were the actual teacher present at that moment on the film. Both the projected image and the student should be recorded on video tape for individual analysis before taking the recording to the group for review.

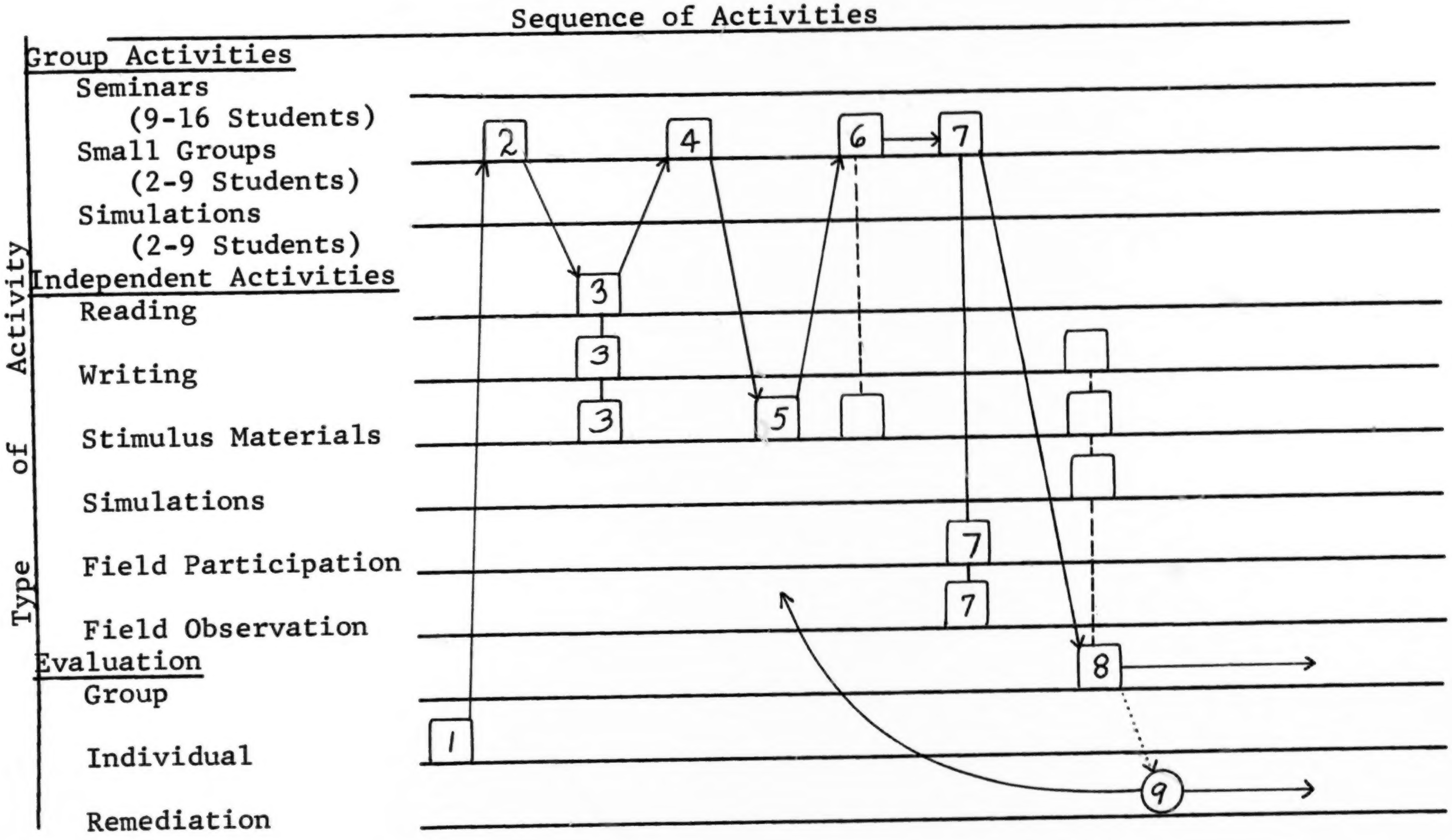
6. The group should meet for a discussion of individual experiences, responses to the films, and to review the recordings made of their own behaviors. Each student should describe the alternatives that were open to him and the rationale for choosing the particular behavior recorded. The group should be supplied with criteria for judging the adequacy of the alternatives proposed for each filmed situation and the factors other teachers considered in making a decision about their actions in each case, in order that the group can decide about the adequacy of its own behavior. If felt necessary, individuals could draw out of the Instructional Resource Center additional films for continued practice in responding to class situations with management behaviors.

7. The students should arrange to assist each other in making video tapes of their own classroom behaviors to demonstrate their abilities to plan and carry out management behaviors of the types studied in this module. Each student teacher should review his own recordings and bring them to the group for analysis. The group should decide when it is ready for an analysis of its activities (the post-test) by an instructor.

8. The post-test should consist of an instructor's review of the students' tape recordings and a review of their records of the alternatives considered in the process of making the decisions shown on the tapes. The instructor should also present several simulated classroom activities for the students to respond to, and should visit each student in class when requested.

9. Remedial activities and materials, under the guidance of a faculty member, would be available when requested. The final post-test should be established by the student and the instructor.

Modular Flow Chart TTP-14
Figure 6.15


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
3
3
4
5
6
7
7
7
8
9

TTP-15: Fostering Personal Development in Groups

I. Prerequisites: Completion of TTP-14. Completion of any three of the Child Development modules on different theories of child development. Concurrent with teaching responsibilities in the public schools.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--24 hours.
University faculty time--4 hours per group of four students.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to enlarge the behavioral repertory of the student from his ability for interaction with one child for the purpose of assisting him in his socio-emotional development, to additional behaviors of interaction with a group of pupils and establishing an environment to foster their personal development in and through the group. The general objectives of this module should prepare the student to do the following:

A. Describe a set of socio-interpersonal teacher behaviors for interacting with a group of children and individuals within the group, and then, providing a rationale for each type of behavior based upon at least two different theories of child development.

B. Identify and record the different styles of socio-interpersonal behaviors demonstrated by teachers in mediated classrooms, and provide a rationale for the behaviors observed and the resultant influence on the children in the class.

C. Plan and demonstrate the ability to exhibit a wide variety of socio-interpersonal behaviors in live interaction with his class and provide an explanation (from theories of child development) for the observed reactions of the group and individuals within the group.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. When observing on film or video tape the mediated behavior of several teachers interacting with their respective classes under conditions involving both management and socio-emotional factors, identify the management and interpersonal teacher behaviors used by each teacher, such as the management behavior described in TTP-14 and:

1. Interpersonal behaviors described in TTP-2.
2. The use of management techniques to keep the class active while the teacher interacts with an individual child on an interpersonal level.
3. The use of genuine personal self-disclosure to display empathy and confidence in the class.

B. When observing the films described above, be able to relate the resulting child reactions to at least two different theories of child development, relate the probable intentions of the teacher to the actual outcomes of the selected teacher behavior, and make value judgments about the observed behavior and its effect on those pupils at that time.

C. When observing the mediated behavior of a class of children, be able to demonstrate a wide variety of interpersonal behaviors and provide a rationale for the behaviors demonstrated rather than any other possible alternatives.

D. When teaching a class in an elementary school, plan for and demonstrate examples of socio-interpersonal behaviors interacting with the entire class and individuals within the class, and describe the reaction of the children and relate these behaviors and his to at least two theories of child growth and development.

V. Modular Activity Flow Chart: See Figure 6.16.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:

   a. Have additional instruction prior to taking this module.
   b. Study all or selected portions of this module.
   c. Proceed to the post-test or following module.

2. The four students working together on this module should meet to obtain orientation to this module and its purposes, and to schedule their independent and group activities.

3. Each student should work alone with a study guide, semi-programmed texts, coordinated reference reading materials and audio-visual materials. The student should observe films of teacher-class interactions and learn to discriminate between teacher management and interpersonal behaviors, and observe the effect of these behaviors on the children as a whole and on different types of pupils (identified in the text materials accompanying the film).

4. The group should meet with the objective of sharing their reactions to the self-study materials and to resolve any

questions. They should be oriented to the next phase of their individual work with audio-visual materials and the video tape recorder.

5. Each student should view a film portraying a class as though he were the teacher working with the class (in the teacher presentation mode, small group work, and individual pupil work). He should behave as though he were interacting with the pupils, and his behavior should be recorded for individual, and later, group review and analysis.

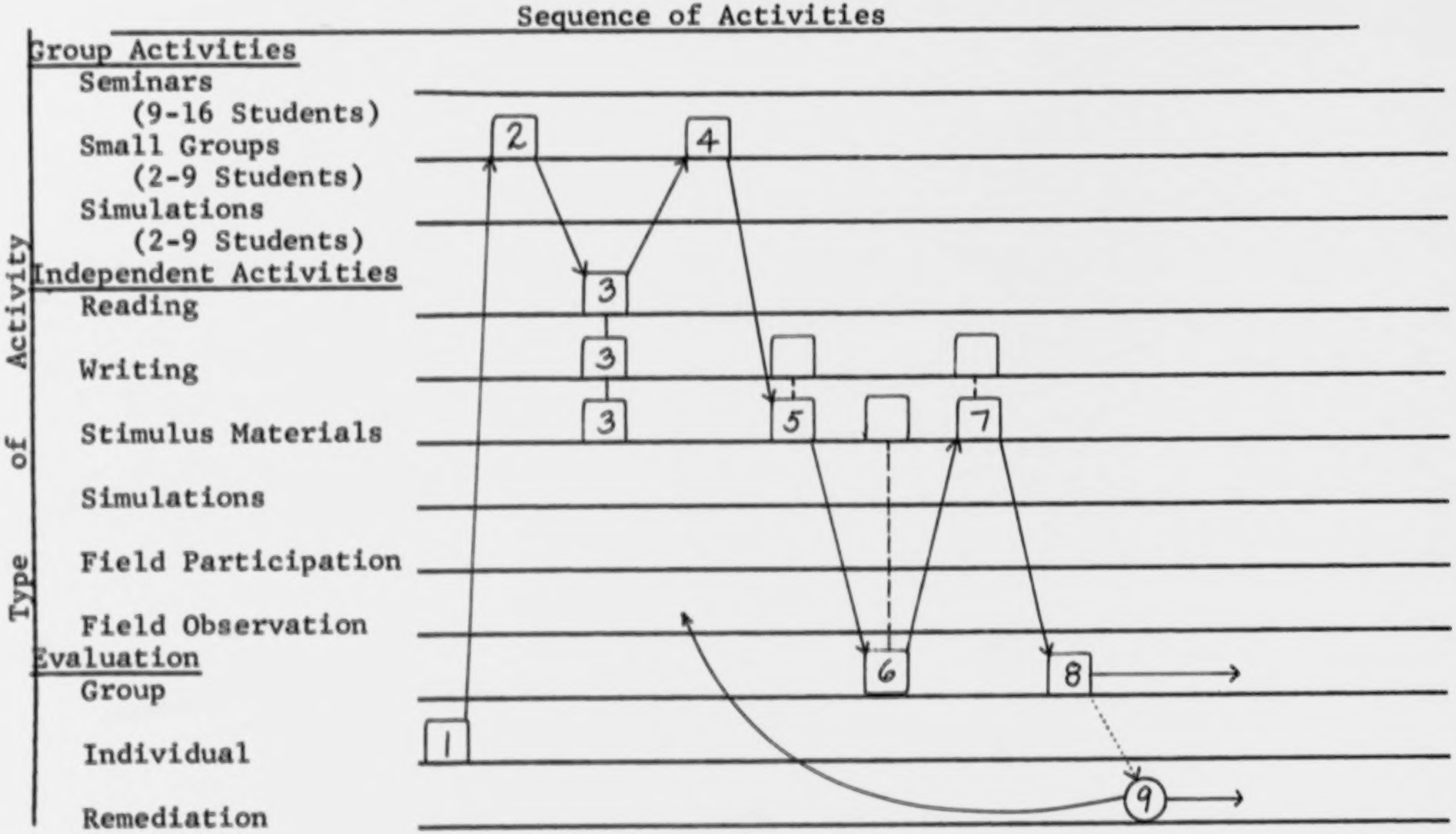
6. The group should meet to discuss their experiences with the films and to analyze their recorded behaviors. Each student should describe the alternatives he had considered and his rationale for selecting the behavior recorded. The group should be supplied with criteria for judging the adequacy of the rationale for selecting one of several alternatives and the factors that other teachers had considered in making the same decisions. The group should use these criteria and examples to evaluate the adequacy of their own decision-making processes and behaviors. Additional stimulus films should be available for additional practice in making similar decisions in the active process of interacting with a class of pupils.

7. The students should arrange their schedules to assist each other in making video tape recordings of their own classroom teaching in the public schools as they demonstrate their abilities to plan and exhibit both management and interpersonal behaviors in interacting with their classes. Each student-teacher should review his own recordings and bring them to the group for review and analysis.

8. The post-test should consist of the group's review of its activities with an instructor, including the alternatives perceived by the student-teachers and their reasons (values) for selecting the behavior observed. The instructor should also present several simulated classroom activities for the students to respond to, and should visit each student-teacher upon request.

9. Remedial activities and materials would be available, with guidance from a faculty member, upon request. Close coordination between the student and instructor would make the post-test integral with instruction.

Modular Flow Chart ITP-15
Figure 6.16


Sequence of Activities
Type of Activity
Group Activities
Seminars (9-16 Students)
Small Groups (2-9 Students)
Simulations (2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
3
3
4
5
6
7
8
9

TTP-16: Differentiating Instruction for Individuals within Groups

I. Prerequisites: Completion of TTP-15, CD-9, 10, 11, and 12. Completion of CM-16, Individual Lesson Plan. Concurrent with teaching experience in public schools.

II. Placement of Module: Senior, professional year.

III. Estimated Time: Student time--24 hours.
University faculty time--4 hours per group of four students.
Clinical Professor and Clinical Teacher time--0 hours.

IV. Operational Objectives: The purpose of this module is to enlarge the behavioral repertory of the student to include the ability to interact with individual children in a group setting, and to organize instruction that provides for different instructional needs. The general objectives of this module should prepare the student to do the following:

A. Use information on the different academic needs of children in a class, to plan materials and strategies for individualized and multiple small group learning (see materials developed in CM-16).

B. Conduct the strategies, using the materials developed, and record the teacher-pupil-materials interaction. The recording should then be analyzed to demonstrate the presence of the intended management, interpersonal and instructional strategies.

If these broad objectives are achieved, the student should, for example, be able to do the following:

A. When given descriptions of the characteristics of children in a simulated class, prepare a plan for a full day which includes lessons for several academic topics with different groupings of children for each, discuss or show strategies for shifting from one activity to another (including routine administrative functions such as collecting money, taking attendance, going to another room, etc.) indicating sequence of teacher behaviors including management, interpersonal and instructional.

B. For the class and plan described above, using films to represent class members at specific transitions, conduct portions of the plan and record the strategies used (video tape) for subsequent individual and group analysis.

C. When shown a film of a class in which children are active in small groups and independently, identify and record the full range of behaviors exhibited by the teacher, describe the rationale for the style of teaching observed, and state the advantages and limitations of this manner of teaching.

D. For the class the student is teaching in the public school, plan, conduct, record on video tape, and analyze the teacher-pupil interactions during a period of small-group and individualized instruction. Identify each major type of teacher behavior exhibited, describe the alternatives possible at each "choice point" in the lesson and also describe processes and criteria used in selecting the behavior.

V. Modular Activity Flow Chart: See Figure 6.17.

VI. Description of Instructional Activities:

1. Pre-test to determine whether the student should:
    a. Have additional instruction prior to taking this module.
    b. Study all or selected portions of this module.
    c. Proceed to the post-test or following module.

2. The four students working on this module should meet for orientation to the objectives and activities of this module and to schedule their independent and group activities.

3. Each student would work alone with a study guide, semi-programmed texts, coordinated reference reading material, and audio-visual materials. He should observe films of teacher-pupil interactions under conditions of individualized and small group instruction. He should have descriptions of the children in each of the classes observed (various ages, abilities, cultural backgrounds). For each type of teacher behavior recorded with different children, he should be provided with a rationale in terms of the teacher's objectives and the personal and academic needs of the child. He should provide alternative strategies that might have produced other outcomes.

4. The group should meet to share their reactions to the self-study materials with each student presenting one of the episodes he observed, analyzed, and proposed alternatives for. Since they all have been observing the same simulated classes, this meeting should simulate the meeting of a team of teachers trying to plan for more effective instruction.

5. Each student should work alone, viewing another film of one of the classes observed above. He should act as though he were the teacher for that class, interacting with the pupils as they work independently and in small groups, and interaction at certain critical points in the transition of an activity

for one pupil or a group. He should make a video tape recording of the projected image of the film and his own corresponding behavior for his own analysis and later discussion with the group.

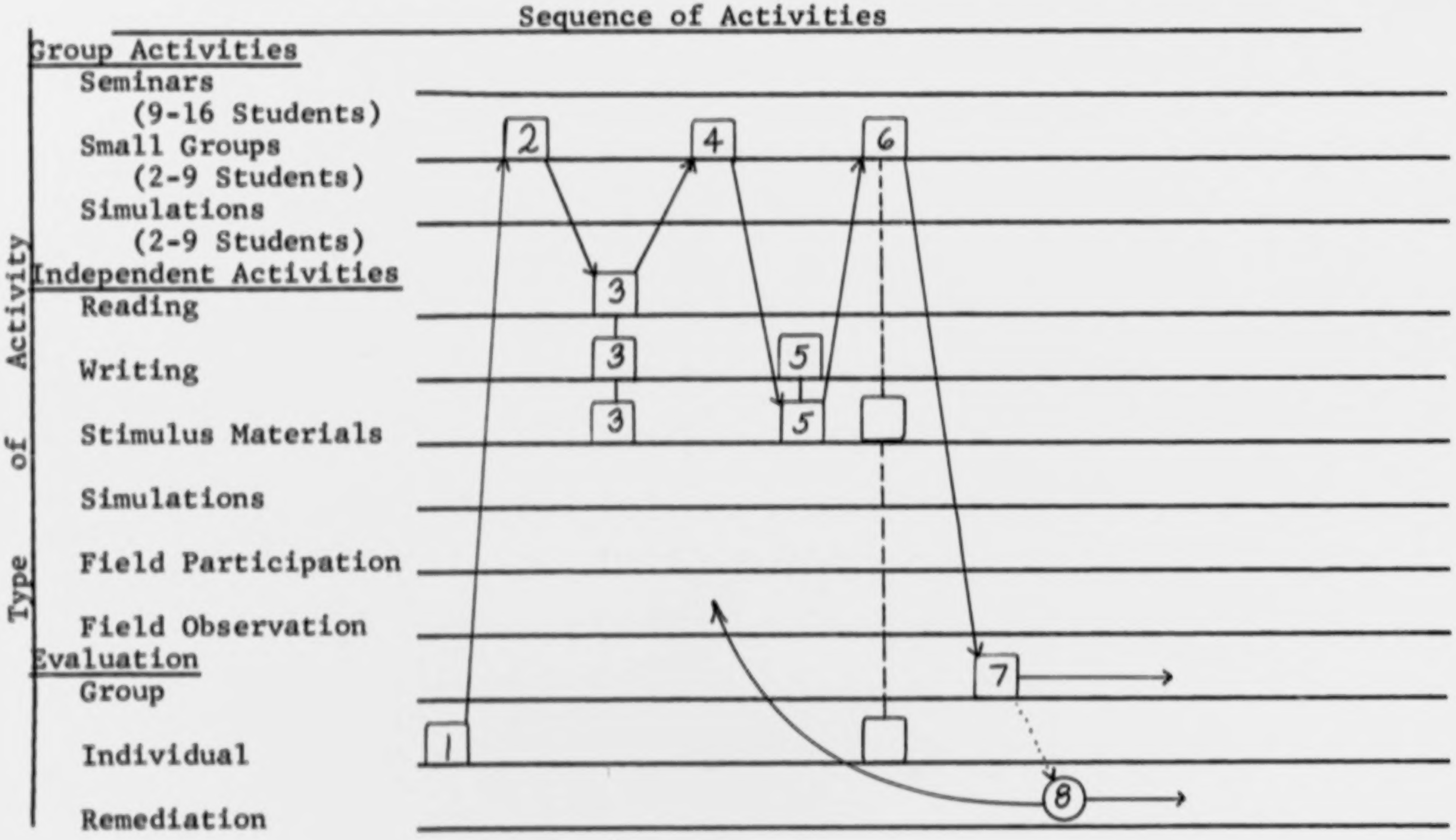
6. The groups should meet to review their recordings and to comment upon each student's rationale for the demonstrated behavior. The group should be given criteria for judging the adequacy of the process through which each student should have gone in making a decision on action in each filmed episode, and also be given examples of the behavior of other teachers faced with the same episode. The group should use these criteria and examples to judge the adequacy of their own decision-making processes. Additional films should be available to provide new stimulus materials for further practice with the skills involved in this type of decision-making. The group should make its own decision about its readiness for attempting the same kind of activities in the classes they are conducting in the public school.

7. The students should arrange their own schedules to assist each other in making video tape recordings of their own classroom strategies as they work to provide individualized and small group instruction, using the materials and techniques developed in preceding modules. Each student should review his own recordings for self-analysis, and then bring them to the group for further analysis and evaluation using the same criteria as in step #6 above. (Evaluation is made on the process of decision-making, not on the quality of the teacher behavior actually demonstrated, i.e., evaluating the "why" rather than the "what" or "how".

8. The post-test should consist of the group's review of its activities with an instructor who should analyze portions of the recordings and discuss the alternatives and rationale for the decisions made. The instructor should also visit their classroom (when invited), and should present short simulated classroom activities for the students to respond to and discuss.

9. Remedial activities and materials would be available, with guidance from faculty members, upon the request of the individual students or the instructor. Close coordination between the students and the instructor should make this remedial work and its subsequent post-test a matter for decision relative to the demonstrated needs.

Modular Flow Chart TTP-16
Figure 6.17


Sequence of Activities
Type of Activity
Group Activities
Seminars
(9-16 Students)
Small Groups
(2-9 Students)
Simulations
(2-9 Students)
Independent Activities
Reading
Writing
Stimulus Materials
Simulations
Field Participation
Field Observation
Evaluation
Group
Individual
Remediation
1
2
3
3
3
4
5
5
6
7
8